

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 813.—Vol. XXI.]

LONDON, SATURDAY, MARCH 22, 1851.

[PRICE 6D.]

Stannaries of Cornwall.—In the Vice-Warden's Court.
PURSUANT to a Decree of the Vice-Warden's Court, made in the consolidated causes of "ROBINS, the Younger, and OTHERS v. BARRETT," the CREDITORS in respect of the ROCHE ROCK TIN MINE, in the parish of ROCHE, within the said Stannaries, are, on or before the 3d day of April next, to come in and PROVE their DEBTS before the Registrar of the said Court, at his office in Truro; or, in default thereof, they will be peremptorily excluded the benefit of the said Decree.
Dated Registrar's Office, Truro, March 19, 1851.

In the Matter of the Joint-Stock Companies' Winding-up Acts, 1848 and 1849.
MASTERS' OFFICE, Southampton-buildings, 13th day of February, 1851.
THE BANWEN IRON COMPANY.

TO BE LET, OR SOLD, pursuant to an Order made in the matter of the Joint-Stock Companies' Winding-up Acts, 1848 and 1849, and of the Banwen Iron Company, with the approbation of Richard Torin Kinderley, Esq., the Master of the High Court of Chancery, charged with the Winding-up of the said Company, the MESSAGES, FARMS, LANDS, TENEMENTS, and HEREDITAMENTS, called or known by the names of PANTYDDRAINEN, or BANWEN FARM, TIRBACH, TON-PURTHIN, GNISEMEN, and YNISDOMLID FARMS, containing 374 acres, or thereabout, with the MINES and SEAMS OF COAL, CULM, and IRONSTONE, and IRON MINE, MINERALS, FIRE-CLAY, QUARRIES, ROCKS, and STONES, in, upon, or under the said FARMS and PREMISES, hitherto used by the BANWEN IRON COMPANY; and also the WORKS and PLANT of and belonging to the said Company.

THE ESTATE is situated in the parish of CADOXTON, juxta NEATH, in the county of GLAMORGAN, 13 miles from the town of Neath, and 16½ from the port of Swansea. The Swansea Canal is within 4 miles of the property, and a tramway connects it with the works. The South Wales and Vale of Neath Railways are within a short distance of the estate. The PROPERTY is very rich in IRON ORE, and the LAND abounds with the finest ANTHRACITE COAL, which is worked by level. The WORKS are capable of WORKING and TURNING OUT WEEKLY NINETY TONS OF PIG-IRON.

For further particulars and terms apply to Mr. Henry Adron, of No. 10, Coleman-street, London, the official manager of the said Company; and of Messrs. Bristow and Tarrant, solicitors, No. 3, Bond-court, Walbrook, London, and Greenwich, Kent.

The Estate and Works may be viewed any day between the hours of Ten in the morning and Five in the afternoon.

NORTH HIDING OF YORK.
Valuable FREEHOLD INVESTMENT, 7 miles from GAINSBOROUGH, STOCKTON, in the vicinity of the recent extraordinary discoveries of Ironstone.

MR. SINTZENICH is favoured with instructions to SELL, BY AUCTION, at the Royal Hotel, LEEDS, on Thursday, the 3d April, at One o'clock, a most valuable FREEHOLD ESTATE, known as

GERRICK FARM.
situate in the township of MOORSHELM, having a substantial FARM-HOUSE and AGRICULTURAL BUILDINGS, comprising nearly 168 acres of capital land, well drained, let to an excellent tenant, at £160 per annum. This desirable estate is situated in the immediate vicinity of the recent extraordinary discoveries of Ironstone and Coal, and it is more than probable that it possesses these valuable minerals. It is a free, and land tax redeemed. Particulars may be had at the place of sale; of J. P. Sowerby, Esq., solicitor, Stokeley; or the auctioneer, 7, Lincoln's Inn-fields, London, who will give orders to view the property.

LAST GREAT SALE AT THE BRITANNIA BRIDGE.
HIGHLY IMPORTANT TO CONTRACTORS, BUILDERS, QUARRY PROPRIETORS, MINERS, FARMERS, AND OTHERS.

MR. W. DEW begs to announce that he has been selected by Messrs. Nowell, Hemmingsway, and Pearson, as well as by the Directors of the Chester and Holyhead Railway Company, to DISPOSE OF, BY PUBLIC AUCTION, on Tuesday, Wednesday, Thursday, and Friday, the 28th, 29th, 30th, and 1st days of April, 1851 (commencing most punctually at Eleven o'clock each morning), the entire of the

STOCK OF TIMBER, MACHINERY, WROUGHT AND CAST-IRON.
And OTHER EFFECTS, now lying on the ground abutting the BRITANNIA TUNNULAR BRIDGE (on both the Carnarvonshire and Anglesea sides), of which the following is a condensed summary:—

THE MACHINERY.
Which has been furnished by the first makers, comprehends 22 superior and exceedingly powerful wooden and iron-framed jennies in good repair, six iron-framed double crabs in good order, five powerful landing cranes, capable of lifting 16 tons, well tested, machinery for 25 travellers in good condition, 20 40-foot pile engines, and one ringling ditto, two saw frames, with circular saws, six east-iron hoisting drums, 3 feet diameter and upwards, one friction gear, several new spur wheels of various dimensions, pinions, pedestals, three 6 inch wrought-iron shafts, in 18 feet lengths, with couplings and pedestals, single, double, and treble wooden and iron sheave blocks, sheaves and hooks of various sizes, shear legs of different lengths.

One highly-finished 15-horse power HIGH-PRESSURE STEAM-ENGINE, with portable boiler, made by Messrs. Galloway, of Manchester, in fine working order; and other sundry articles, fully described in the catalogue.

ABOUT TWO HUNDRED TONS OF WROUGHT AND CAST-IRON.
In bars and bolts, of the best Low Moor iron; pile shoes, screws, nuts, and scrap-iron, classified into uniform lots.

Upwards of TWENTY THOUSAND FEET OF TIMBER, well seasoned, comprising Red and Pitch Pine, Yellow Deal, &c., in balks, planks, and scantling.

FORTY THOUSAND WELL-BURNT BUILDING BRICKS.
A QUANTITY OF RUMCORN AND LIMESTONE ASHLAR.

A large number of native and brick barrow in good repair. Wooden pumps and water barrels; six large wooden water tanks; a large collection of smiths' tools, consisting of anvils, bellows, vises, screwing tackle of all sizes; an excellent turning lathe, and all other tools appertaining to this branch.

TWENTY TONS OF CHAIN.
of various lengths, and the "best best" quality, made by an eminent manufacturer (tested and warranted); several lengths of cast-iron piping; an immense assortment of quarry tools, crowbars, masons' soft and hard stone picks and implements; cables, hawsers, and other ropes; 20 ladders of various lengths.

FOURTEEN WOODEN COTTAGES,
with slate roofs, and other erections, admirably adapted for sheds and out-houses; two well-built fairs, the *Dryadon* and *Union*, of 60 tons burthen each, the *Britannia* classes; 11 SIX RIVER BOATS, of different measurements; 10 anchors (various); a very strong 6-inch wheel, two-inch shaft, and several sets of gear, as well as other numerous materials, more fully enumerated in the catalogue.

The whole of the above have been used in the erection of the masonry of the Britannia Bridge, and have, consequently, been most efficiently tested and proved, and will be found to be a collection of materials, which for adaption for the several purposes for which they were intended will be rarely found to be equalled, and but seldom submitted to public competition.

Catalogues, embodying every particular, may be had on and after the 1st of April, at the following places:—All the stations on the Chester and Holyhead line, the Mold Branch; the principal Inns in the vicinity; at the office, Britannia Bridge; at the Talbot Hotel, Market-street, Manchester; at Mr. D. Hodgkins, Auction Rooms, Queen's-square, Liverpool; and of the auctioneer, Mr. Dew, Green Cottage, Llangefnog, Anglesea.

MR. THOMAS BLANDFORD will SELL, BY AUCTION, at the Queen's Head Inn, NEWCASTLE-UPON-TYNE, on Saturday, the 12th day of April, 1851, at One o'clock in the afternoon, the FREEHOLD and TITHES-FREE

ESTATE OF THE HOLE.
Consisting of 103 acres, or thereabout, of anciently enclosed LANDS, and 222 acres, or thereabout, of more recently enclosed PASTURE, and an undivided PORTION of an adjoining MOOR, containing 838 acres, or thereabout; and an undivided PORTION of a PARCEL of LAND, containing 23 acres, or thereabout, and situated in PRIORSDALE, in the parish of ALSTON, in the county of CUMBERLAND, 6 miles distant from the town of Alston, on the line of turnpike-road from Alston to Middleton, which road passes through the heart of the property, connecting it with the Branch Railway from Haithwaite to Alston, which is expected to be completed in the course of 1851.

The MINERALS under the anciently enclosed lands belong to the proprietors of the soil, and those under the above-mentioned pasture and moor, and also under an adjoining pasture, containing 204 acres, or thereabout (the property of the Commissioners of Greenwich Hospital), belong to him jointly with the Commissioners of Greenwich Hospital; and those under the parcel of land, containing 23 acres, belong to the proprietors of the soil.

The ESTATE abounds in LEAD, IRON, COAL, LIME, &c.; and the strata and most of the same as those in which the rich mines of Alston Moor, Wardale, Teesdale, Alledale, Neathdale, &c., have been worked with the greatest success in the immediate neighbourhood. Formerly a large quantity of lead was obtained on the property; and one vein which has been, and still continues to be, worked with considerable success, is standing whole for more than a mile in length, and produces from 60 to 90 ounces of silver to the other of lead (21 cwt.).

The property is well fenced, and has abundance of water and water-power, and is sheltered on the north by the plantations of the London Company. The land has been extensively drained, limed, and planted, but is still capable of great improvement if these operations are continued; and this can be done at a very trifling expense, as the stones for draining, together with limestone and coal, well adapted for burning it, and a kiln for that purpose, are all conveniently situated about the middle of the property.

Being surrounded by the extensive preserves of the Duke of Cleveland and the London Company, the estate abounds with grouse and other game; and, from the nature of the ground, is peculiarly well adapted for shooting in the latter part of the season, when the birds are wild and unapproachable on open ground. The Tees, one of the finest rivers in the north of England, is within an hour's walk.

The HOUSE, which is well adapted for a shooting-box, is pleasantly situated on the banks of the South Type; and there are COTTAGES and other OUTBUILDINGS, affording all that is necessary for an extensive grazing farm.

John Fenwick, the shepherd on the premises, will show the property and plans; and conditions of sale may be had at the Blue Bell Inn, Alston; the Queen's Head Inn, Newcastle-upon-Tyne; the Journal Office, Carlisle; of Mr. James Burnett, jun., Orvington, near Garsdale, Wether. Chisholme & Co., 64, Lincoln's Inn-fields, London; Messrs. J. and R. Gibson, solicitors, Hexham; and Mr. Thomas Blandford, Corbridge, near Hexham.

MR. JAMES CROFTS, of 4, KING-STREET, CHEAPSIDE, MINING BROKER, OFFERS HIS SERVICES for the PURCHASE or SALE of MINING SHARES, and issues a daily Price Current, which may be had on application. Mr. CROFTS acts exclusively for PRINCIPALS, and gives advice on contemplated investments, whether in dividend or speculative concerns—from the former of which an average income may be derived of 12½ to 15 per cent. per annum.

Mr. CROFTS has SPECIALLY FOR SALE—
Tincroft (30 shares)
South Tamar (50 shares)
East Tamar (30 shares)
Wheal Providence (35 shares)
Appledore (30 shares)
Woodman's Well and Broadridge
West Seton (1 share)
Wheal Langford (100 shares)
Wheal Harriet (100 shares)
Spears Consols (50 shares)
No. 4, King-street, Cheapside, March 21, 1851.

MR. J. H. MANDEVILLE, MINING AND GENERAL SHARE AGENT, No. 22, CHANGE-ALLEY, CORNHILL.

MINING SPECULATIONS.—MR. EVAN HOPKINS, C.E., F.G.S., &c., CONSULTING MINING ENGINEER—Office, 13, AUSTIN-FRIARS, LONDON. MR. HOPKINS may be consulted daily by Noblemen, Gentlemen, and Capitalists, who have INVESTED, or may wish to INVEST, their CAPITAL in MINES or MINERAL PROPERTY, both Home and Foreign. This office is the only one of the kind in the kingdom, having no dealings in shares—It is independent, and unconnected with any party, besides possessing a thorough knowledge of Mining in all its branches, practically as well as theoretically, considered as a matter of business, from many years' experience. To avoid the abuses which are daily occurring, at the expense of distant capitalists and the uninitiated, it is particularly requested that no notice be taken of any verbal representations respecting the prospects of mines, without being duly authenticated by a qualified and disinterested person, whose character for judgment and integrity is founded on past transactions in mining. The object of this office is to protect legitimate mining, to see justice done to the capitalists and property, and to make the necessary examinations in time, not only to ensure that the prospects held out are well founded, but also that the concerns are in the hands of regular men of business—without which no mine, however good it may be, can be rendered remunerative to distant proprietors.

All communications to be strictly confidential.

MINING INVESTMENT.—T. FULLER AND CO., 48, THREADNEEDLE-STREET, LONDON, beg to call the attention of capitalists to mining property, as being the most safe investment, at the present moment in particular, an unprecedented increase having already taken place in most dividend-paying mines. T. FULLER AND CO. are in a position to BUY and SELL in all the dividend-paying mines, and also in new ones having present and prospective advantages, having the greatest chance of success, and will take pleasure in furnishing all particulars connected therewith, and have on hand the unappropriated shares in Appledore Silver-Lead and South Carn Brea Copper Mines; these sets are decidedly in the best metalliferous districts in Cornwall, the former being parallel with Trevelyan, Mary Ann, and other rich and dividend-paying Mines; and the latter being situated between Carn Brea, £15 paid, and worth £130; South Wheal Bassett, £10 5s. paid, and worth £360; North Wheal Bassett, and West Wheal Burrell, opened only two years since, with £10 paid, and now worth £350, and paying £120 per annum in dividends. Application for the remaining shares to be made to the above offices, where plans and specimens may be seen. Mining shares will pay from 15 to 30 per cent.

MINES.—MOLYNEUX & CO., 6, FINSBURY-PLACE, SOUTH, and 6, WEST-STREET, FINSBURY-CIRCUS, have SHARES FOR SALE IN DIVIDEND-PAYING AND OTHER MINES, which will ensure to capitalists the safest and most unexceptionable investment.—Office hours from Ten to Five o'clock.

MESSRS. FRANCIS & LIGHTTOLLER, MINING AGENTS AND CIVIL ENGINEERS, OFFICE, No. 34, EXCHANGE ARCADE, MANCHESTER.

Messrs. FRANCIS AND LIGHTTOLLER may be CONSULTED BY MINING COMPANIES or OTHER PARTIES requiring INSPECTIONS and REPORTS on MINES of every description, or by CAPITALISTS and OTHERS desirous of INVESTING their CAPITAL in MINES or other MINERAL PROPERTIES. Statistical and other general information connected with Mines and the Mineral Districts given or obtained with the utmost dispatch.

Capt. Absalom Francis having had upwards of 30 years' experience in the practical management of mines, and reported on most of the principal ones in the United Kingdom, applicants may rest assured they will receive full and satisfactory information on matters connected with mining.

Arbitrators and contractors for the erection of every description of mining machinery.

MINING AND RAILWAY OFFICES, No. 3, CASTLE-TERRACE, EXETER.—MR. JOHN JURY, RAILWAY AND MINING SHARE-BROKER, OFFERS HIS SERVICES to CAPITALISTS in the PURCHASE or SALE of ANY DESCRIPTION OF PROPERTY; and will be happy to point out a selection of such stock as appear the most eligible; from data that can only be arrived at by those who give an undivided attention to the subject.—Every information afforded (either in person or by letter) to capitalists wishing to invest or exchange their securities, and sales or purchases effected upon the best terms, and at one-half the commission usually charged.

MINING SHARES.—MR. HENRY VATCHER, EXETER, OFFERS HIS ADVICE AND ASSISTANCE to PARTIES willing to INVEST in the ABOVE SECURITIES. Ten years' residence in Exeter, together with periodical visits to nearly all the Mines in Devon and Cornwall, enables him to become thoroughly acquainted with their respective merits.—MR. VATCHER has at his command, at all times, practical and experienced agents, so that if any inspection is required, the same can be done without delay.

MR. BELL WILLIAMS, MINE BROKER and VIEWER, 16, CASTLE-STREET, LIVERPOOL.

MR. JOHN DAVIES, MINING SHAREBROKER, No. 38, TOWER-BUILDINGS, TOWER-GARDEN, LIVERPOOL.

LYDFORD CONSOLS SILVER-LEAD AND COPPER MINES, DEVON.—In 5000 shares. CONDUCTED ON THE COST-BOOK SYSTEM.

COMMITTEE OF MANAGEMENT.
MR. SHERIFF HODGKINSON.
RICHARD HALLETT, Jun., Esq.
JOHN RUNDLE, Esq., banker, Tavistock.
JOSEPH THOMPSON, Esq., Finsbury-square.
ARTHUR DEAN, Esq., C.E.
Secretary: J. H. Murchison, Esq., 20, St. Helen's-place.
Bankers: Commercial Bank of London; Tavistock Bank, Tavistock.

Prospectuses, with reports, may be obtained, and specimens of the ore seen, at the office, No. 20, St. Helen's-place, Bishopsgate-street.

HELSTON CONSOLS TIN AND COPPER MINING COMPANY.—In 5000 shares. ON THE COST-BOOK PRINCIPLE.

COMMITTEE.
HENRY FRANCIS HORNE, Esq., Gloucester-terrace, Hyde-park.
W. PATTEN HATMEN, Esq., Rochester.
JOSEPH THOMAS, Esq., Finsbury-square.
THOMAS NELSON, Esq., Finsbury-square.
MICHAEL FITZGERALD, Esq., 102, Sloane-street, Chelsea.
Applications for prospectuses to be made to Mr. C. Daniel, 1, Royal Exchange-buildings; to Mr. James Crofts, 4, King-street, Cheapside; and for shares apply to Messrs. Eykyn Brothers, 22, Change-alley, Cornhill.

CHEADLE COPPER AND BRASS COMPANY.—OAKAMOR MILLS, CHEADLE, STAFFORDSHIRE. In consequence of the decease of the late partner in CHEADLE COPPER AND BRASS COMPANY, their extensive WORKS at OAKAMOR are now TO BE SOLD, OR LET ON LEASE, for a term of years.

The WORKS are in FULL OPERATION, and will be continued by the surviving partners until an acceptable offer may enable them to retire. The quality of the metals manufactured at these works is well-known in the home and foreign trade, and has secured a most valuable connection.

Further information may be obtained on application to Messrs. Ingley, Wragge, and Ingley, solicitors, Birmingham; Latham Ramon, Esq., solicitor, Liverpool; or Rupert Ingley, Esq., Cheshire, Staffordshire; and the works can only be inspected by an order from either of these parties.

OFFICE FOR PATENTS, 7, STAPLE INN, LONDON.—J. MURDOCH (successor and formerly assistant to the late Mr. Hebert, author of the "Engineers' and Mechanics' Encyclopedia") informs INVENTORS and PATENT-TEES that, at his OFFICE, they can INSPECT A CLASSIFIED LIST OF PATENTS (THE ONLY ONE EXTANT), showing at once all the PATENTS that have been GRANTED for any particular object, whereby they may save much trouble and expense, and procure information not otherwise obtainable.

BRITISH and FOREIGN PATENTS OBTAINED, and USEFUL and ORNAMENTAL DESIGNS REGISTERED.—SPECIFICATIONS carefully PREPARED, and REPORTS of ENROLLED SPECIFICATIONS FURNISHED.

FINISHED and WORKING DRAWINGS executed with accuracy and dispatch. OFFICE FOR PATENTS, 7, STAPLE INN, LONDON.

PRESERVATION OF MACHINERY, CHAINS IN MINES.—MR. JOHN SMITH, 3, BROWN-STREET, BURNLEY, STAFFORDSHIRE, respectfully calls the attention of Mine Agents, Railway and Steam-boat Engineers, and Managers of Machinery, to his newly-invented COMPOSITIONS for LUBRICATING and PRESERVING the METAL WORK of MACHINERY in general. One for preventing all rust or corrosion in wire ropes used in mines, and exposed to water and atmospheric action; another for lubricating the axles, and preserving the segments of water-wheels, which cannot be washed off. One for steam-engine boilers, either for marine purposes or on land, preventing all corrosion; one for the journals of shafts and axles, keeping them cool at the greatest velocities; and another for general use on metallic or packed pistons, slide-valves, and mill and other gearing.

The USE of these COMPOSITIONS will be found to effect a GREAT SAVING, as compared with oil or tallow, and are warranted to be highly efficient for their respective purposes. All orders punctually attended to.

No. 3, BROWN-STREET, BURNLEY, STAFFORDSHIRE.

TO CAPITALISTS.—A highly favourable opportunity now offers of EMPLOYING A SUM of about FIFTY THOUSAND POUNDS in acquiring an INTEREST in IRON-WORKS of first-rate importance, most eligibly situated, and of ascertained and well-established capabilities.—Further particulars may be obtained (by principals only) on application to Messrs. Johnston, Farquhar, and Leach, No. 63, Moorgate-street, London.

TO LAND AND MINERAL SURVEYORS.—WANTED. In an old established office, as an ASSISTANT, an experienced MINERAL SURVEYOR. None need apply who cannot produce the most undeniable references of character, ability, &c.—Apply to "No. 42," Post-office, St. Helen's, near Liverpool.

TO COPPER SMELTERS.—A MANAGER AND REFINER. who has been for many years employed in an extensive Copper Works, and who can produce unquestionable testimonials of his abilities in the said capacity, is anxious to obtain a SITUATION at a moderate salary. Would have no objection to go abroad. Address "G. C.," at the office of the Mining Journal, 26, Fleet-street, London.

TO PLUMBERS, TIN-PLATE MANUFACTURERS, &c.—SHARES of a VALUABLE PATENT, connected with, and important to, Persons engaged in these and other analogous branches of business, TO BE DISPOSED OF. Address "S. D. M.," at the office of the Mining Journal, 26, Fleet-street, London.

TO LET.—A BITUMINOUS COLLIERY.—The WERNFAWR COLLIERY, with FIVE VEINS, within a range of about 60 fathoms, each vein varying from about 7 to 4 feet thick. The quality, for house and cooking purposes, is not a superior, but a good one; the coal yielding about 15,000 feet of gas to the ton, and is situated about 4 miles from Swansea, and communicates with all parts of the town, the harbour, and the Swansea Gas-Works, by means of a very superior tram-road.—Apply to Mr. William Thomas, Millbrook Iron-Works.

TO BE LET, ON LEASE, a capital SLATE QUARRY, known by the name of the SEALY HAM QUARRY; it has been worked for 25 years, and has covered the principal houses in the county—is of a fine blue colour, extremely durable, and is too well known to need any recommendation. It is situated about half a mile from the South Wales Railroad, and half-way between Haverfordwest and Fishguard—about 7 miles from each place, and adjoining the turnpike-road. Water machinery is used, and every accommodation will be given for carrying on the work. Apply to Mr. Edwards, Sealy Ham.—March 19, 1851.

TO BE LET, in Lots, for MINING PURPOSES, in NORTH WALES, for a term of 21 years, all that EXTENSIVE RANGE of METALLIFEROUS MOUNTAIN LANDS, part of the ABER HIRNANT ESTATE, within a few miles of the valuable Llangannor Lead Mines, the lots of which have been traced through the property, which is also intersected by various promising lodes, indicative of LEAD and COPPER.—LIMESTONE abounds. The Crown claims have been redeemed. Apply for particulars to H. Richardson, Esq., Aber Hiranant, Bala, North Wales.

LAMB'S HOUSE QUARRY, situate within two miles of NORTH DELABOLE, CORNWALL, and less than one mile from the shipping place, produces SLATE equal in quality to any hitherto discovered in Wales or Cornwall. The party now holding this Quarry is desirous of DISPOSING of ONE-HALF—that is, the person who may purchase a moiety shall have an equal share with the present lessee. To prevent misunderstanding, no one need apply who is unable to command £1000. Apply to Mr. William Sloggett, jun., Boscastle.

IN CHANCERY.—WHEAL PROVIDENCE. THOMAS HARVEY, Plaintiff. GEORGE TRICKETT, WILLIAM CONWAY, and GEORGE WILLIAM REEVE, Defendants.

TAKE NOTICE, that an INJUNCTION has been AWARDED by Vice-Chancellor Lord Cranworth, to RESTRAIN the DEFENDANTS from SELLING or DISPOSING of EIGHT HUNDRED SHARES in the ABOVE MINE, belonging to the above-named Plaintiff, or any of them, and from otherwise dealing with the said shares, or any of them, or with the LEASE or INTEREST of the SAID MINE, in any such manner as by means thereof to invalidate or affect the said Plaintiff's right or title, or evidence of his right or title, to such shares, or any of them, or to deprive the Plaintiff of such shares, or any of them.—Dated this 15th day of March, 1851. W. J. HOLT, Solicitor for the said Plaintiff.

ALL-Y-CRIB MINES.—NOTICE.—ALL SHARES in these MINES must be TRANSFERRED on the COST-BOOK through EDWARD HOLLOWAY, Esq. (purchaser), near ABERYSTWYTH, on or before the 31st inst., in order that the Dividends on the same may be regularly paid.—March 17, 1851.

GREAT COWARCH SILVER-LEAD MINING COMPANY.—In consequence of the large number of applications for shares in this Company, the Committee of Management beg to announce, that they are compelled to POSTPONE the ALLOTMENT for a few days. By order of the Committee. JAMES WESTMAN SHERMAN, Secretary.

26, Bucklersbury, London, March 19, 1851.

GREAT POLGOOTH MINING COMPANY, Winchester.—house, Old Broad-street, March 21, 1851.—On and after THURSDAY, 27th inst. the BANKERS' RECEIPTS can be EXCHANGED at this office for CERTIFICATES.

KINZIGTHAL MINING ASSOCIATION.—Notice is hereby given, that all SHARES upon which the CALLS of FIVE SHILLINGS, due 21st January, 1850, and FIVE SHILLINGS, due 28th September, 1850, REMAIN UNPAID after the 29th inst., will become ABSOLUTELY FORFEITED. 1, Adelaide-place, March 6, 1851. GEORGE COPELAND CAPPER, Secretary.

KINZIGTHAL MINING ASSOCIATION.—Notice is hereby given, that the FOURTH ANNUAL GENERAL MEETING of this Association will be HELD here on Tuesday, the 8th April, at One o'clock precisely. By order of the board. 1, Adelaide-place, March 10, 1851. GEORGE COPELAND CAPPER, Secretary.

TRELEIGH CONSOLIDATED MINING COMPANY.—The Directors hereby give Notice, that a MEETING of the shareholders will be HELD at the office on Monday, the 7th April next, at One o'clock precisely, at which the accounts for six months, ending 31st March inst., will be submitted. 57, Old Broad-street, March 19, 1851. WM. NICHOLSON, Secretary.

UNION TIN SMELTING COMPANY.—Notice is hereby given, that the HALF-YEARLY GENERAL MEETING will be HELD here on Wednesday, the 9th day of April next, at Two o'clock precisely, when the statement of accounts and the Company's affairs will be submitted. F. WATSON, Secretary. Salvador-house, London, March 8, 1851.

REGISTRY FOR THE SALE AND PURCHASE OF MINING SHARES.—DEBANT & CO., MINING SHAREBROKERS, 58, LOMBARD-STREET, LONDON. Beg to draw the attention of Capitalists to their REGISTRY for the SALE and PURCHASE of SHARES.

Devon Great Consols	Wheal Mary Ann	South Caradon
Carn Brea	Wellingtons	Great Wheal Sheba
West Caradon	West Baller	Trevasky
Trelawny	Tolguis	Bedford United

N.B.—Statistical information furnished on British and Foreign Mines.—No CHARGE made for the registration of shares unless business be transacted.

MESSRS. BOXALL & CO., MINING SHARE DEALERS, 5, CROSBY HALL CHAMBERS, BISHOPSGATE-STREET.

MESSRS. TREVARTON AND CO., MINING SHARE DEALERS AND BROKERS.—S, ST. JAMES'S-STREET, FALMOUTH.

MR. W. BIRDSEY, MINING AGENT, begs to acquaint his Friends and the Public, that he has OFFICES at No. 1, ST. MICHAEL'S-ALLEY, CORNHILL, and takes this opportunity to thank them for the favours he has hitherto received. From an extensive experience in MINING PROPERTY, in which he has been engaged upwards of 20 years, Mr. Birdsey flatters himself he will be enabled to give much general information.—He having personally visited most of the mines in Cornwall.—MR. BIRDSEY trusts, by strict attention to the interests of those who may honour him with their confidence, to merit a continuance of their orders.

Transactions of Scientific Bodies.

MEETINGS DURING THE ENSUING WEEK.

MONDAY	Geographical—3, Waterloo-place	8 P.M.
	British Architects—16, Grosvenor-street	8 P.M.
TUESDAY	Medical and Chirurgical—53, Berners-street	4 P.M.
	Civil Engineers—25, Great George-street	9 P.M.
WEDNESDAY	Zoological—11, Hanover-square	8 P.M.
	Society of Arts—Adelphi	8 P.M.
THURSDAY	Geological—Somerset-house	8 P.M.
	Antiquaries—Somerset-house	8 P.M.
FRIDAY	Royal Society of Literature—4, St. Martin's-place	4 P.M.
	Royal Institution—Admiralty-street	8 P.M.
SATURDAY	Medical—33, George-street, Hanover-square	8 P.M.

GEOLOGICAL SOCIETY.

March 12.—W. HOPKINS, Esq., (president), in the chair.

Charles Johnston, Esq., and Capt. Richard Strachey were elected Fellows. The following communications were read:—

1. On the Fossil Plants of Scarborough; by C. J. F. BUNBURY, Esq., Foreign Sec. G. S. In this paper were described 10 species of ferns, calamites, &c., from the sandstones and shales of the oolitic series in the neighbourhood of Scarborough and Whitby. These rocks, the author remarks, have for many years been known to geologists as being singularly rich in fossil remains of plants, equally remarkable for their beautiful state of preservation as for the variety of forms assembled within a small space. It may be said, indeed, that but for the "plant-beds" at Grinstead, Cloughton, Haiburn, and Whitby, little would be known of the vegetation of the Jurassic period.

The following is a list of the plants described:—

1. *Sphenopteris nephrocarpa*, n.s.
2. *Balera gracilis*, n.s.
3. *Sagenopteris cuneata*, Morris, Cat.
4. *Clepteria*, L. and H.
5. *Pecopteris capitata*, Phill.
6. *Pecopteris exilis*, Phill.
7. *Equisetum (Asterophyllites?) laterale*
8. *Calamites giganteus*, Bean, MS., L. & H.
9. *Cryptomerites divaricata*, n.s.
10. *Palmyra? Williamsoni*, Brong.
11. *Lycopodium Williamsoni*, Brong., L. & H.
12. *L. microphyllum*, Phill.
13. *Walcchia Williamsoni*, Morris, Cat.

2. On the Occurrence of Upright Calamites near Pictou; by J. DAWSON, Esq.

3. Additional Remarks on the Structure of Calamites; by J. Dawes, Esq. F.G.S.

In addition to a detailed résumé of the observations of the continental naturalists on the structure of the calamite, and a critical comparison of the different views entertained by them, the author referred to his former communications on the subject, and detailed some additional observations he had lately made, remarking that in some parts of their structure the calamites more especially seemed to bear greater or less resemblance to the Sigillaria, Haloniae, Lepidodendra, and other plants of the coal formation.

INSTITUTION OF CIVIL ENGINEERS

MARCH 18.—WILLIAM CURTIS, Esq. (president), in the chair.

The paper read was "An Account of the Sea Walls at Penmaen Mawr, on the Line of the Chester and Holyhead Railway," by Mr. H. SWINBURNE.

These walls were described as extending over a length of one mile and a quarter, sustaining a terrace beneath the steep slope of Penmaen Mawr, through the rocky headland of which the railway was carried by means of a tunnel, about one-eighth of a mile in length. This terrace was partly cut out of the cliff on the east side of the headland, and on the west side, for a distance of 550 yards, it was wholly formed of embankment, beyond which there was a cutting about 110 yards in length, followed by 220 yards of terrace; then another cutting about 350 yards in length, succeeded by an embankment retained on the seaward side by a wall, about 260 yards of which was within the reach of high tides. The original design for these walls consisted of a plain retaining wall, nearly triangular in section, 3 feet thick at the formation level, with a straight face battering 3 inches per foot—the back being vertical. The parapet was to have been formed of a small breast wall 3 feet higher than the level of the rails, and 2 feet thick. The masonry was specified to be "coursed walling," squared with the pick; and the face to consist of one header and two stretchers alternately.

The works were commenced in the autumn of 1845, but after two months' experience on the coast, it was thought advisable to deviate from the original design of a straight face to the wall, and to substitute an arc of a circle of 60 ft. radius, with a slightly overhanging parapet, and to prevent the great increase of masonry which would have resulted from this alteration, the back of the wall was also curved. This was afterwards found to be impracticable, and the section was, therefore, materially altered. The nature of the materials not admitting of the "coursed walling" being executed with facility, it was determined to introduce an ashlar facing of limestone, procured from the north coast of Anglesea, and set in cement for a depth of 18 inches from the face. The main sea wall, immediately to the westward of the headland, was now commenced, and as the embankment behind it was dependant on the completion of the tunnel, and the wall was unavoidably built in many detached lengths, it was necessary to increase the width of the base, by reducing the batter of the back of the wall. This wall had advanced very briskly during the summer of 1846, and was within 9 feet of the levels of the rails, with all the lengths joined, excepting the two openings through which the materials were carried from the beach, when on the 22d Oct., the coast was visited by a severe gale, with a 17 ft. tide, which completely destroyed the central portion of the wall between the two openings, besides damaging the other portions, and sweeping away the beach in front of the centre of the wall. In consequence of this lowering of the beach, it was decided to substitute for the central portion of the wall, an open viaduct, consisting of 13 openings, each 86 feet in clear width, and spanned by 10 cast-iron girders, two for each rail, resting on solid ashlar piers, 32 feet in length, 6 feet thick under the impost, and 6 feet 8 inches thick at the footings, with semicircular ends next the sea. The remaining portions of the wall were completed with the limestone ashlar facing, taken from the destroyed length of wall, set in cement, and in many cases backed with brickwork, also set in cement; they were also built more upright, and nearly straight on the face. In order to preserve the foundations of those parts of the wall which remain uninjured by the storm, it was resolved to form a breakwater and terrace in front, by driving a zigzag row of piles, in bays at right angles to each other, and to back these piles with planks, behind which an artificial beach was formed.

The parapet of the first length of wall, immediately to the eastward of the headland, was built for a length of 130 yards, from 8 to 11 ft. higher than the level of the rails, for carrying one end of a slanting roof, or "lean-to," formed of whole timbers set close together, as a protection against stones and debris, falling from the face of the cliff.

In spite of the great difficulties encountered during the progress of these walls, arising from the peculiar locality and from the violent action of the sea, the viaduct last constructed proved perfectly satisfactory; it was, however, shown that in point of expense it would probably have been as cheap to have pierced a longer tunnel, and had a less extent of sea wall, as the contingent expenses incurred in contending with the waves were very great, and were of a nature scarcely to be foreseen and provided for by engineers.

The paper announced to be read at the meeting of Tuesday next, March 25th, was "On the Navigation of Newry," by Sir John Rennie, M. Inst. C.E.

Models of the two water-wheels at Great Devon Consols Mines have been forwarded for exhibition at the Crystal Palace. The wheels, which are of polished mahogany and brass work, reflect great credit on Mr. N. Smith, the engineer of the mines, under whose superintendence they have been perfected. The original wheels were erected by Messrs. Nicholls, Williams, and Co., of the Bedford Foundry, Tavistock.

A brazer of Thirsk, Yorkshire, has constructed a copper teakettle out of a farthing, which he purposes sending to the World's Fair. The kettle is tinned inside, and is in every respect entire.

LILLIPUTIAN NAILS.—Three thousand nails, of gold, silver, and iron, have been manufactured by a native of Bromsgrove, for the Great Exhibition. They are of such diminutive proportions, that the whole number weigh but 3 grs. The same ingenious person, upon the occasion of her Majesty visiting the late Earl of Plymouth, at Hessel Grange, manufactured a thousand, which were ingeniously packed in a small goose quill! Mr. Norris, of Worcester-street, has also completed an entire set of nailers' tools, which is considered a great curiosity, weighing but a quarter of an ounce, whereas the average weight of nailers' tools is 1 cwt.

An extraordinary sized cast-iron plate has just been planed by the Haigh Foundry Company, for a plate-glass firm in Lancashire. The glass for the manufacture of which this plate is designed will be an enormous piece, and will be sent to the Great Exhibition. Its dimensions are 18 feet 6 inches in length, and 10 feet 4 inches in breadth. The plate itself is 3 inches thick, with plates underneath for the purpose of strengthening it. We believe this is the only firm in England who could have successfully undertaken the planing of so extensive a surface.—*Wigan Times*.

BILIOUS COMPLAINTS, INDIGESTION, FLATULENCE, AND AFFECTIONS OF THE LIVER MAY BE CURED BY HOLLOWAY'S PILLS.—Symptoms, indicative of these disorders, are a feeling of nausea, distention, and spasmodic pain in the stomach, sense of oppression, and sinking after eating, want of appetite, heartburn, languor, deflection of spirits, and general debility. The removal of the cause of complaint is the most important step, for which purpose have recourse to Holloway's Pills, as they possess such cleansing and renovating properties that the action of the liver is speedily corrected, the redundancy of the bile carried off, the stomach strengthened, the spirits revived, and the patient is restored to perfect health.—Sold by all druggists, and at Prof. Holloway's establishment, 244, Strand, London.

A Compendium of British Mining.

BY J. Y. WATSON, ESQ., F.R.S.

THE TRESAVEAN COPPER MINE, IN THE GWENNAP DISTRICT.

This mine, once or twice abandoned as a failure, was at length taken up by a party who persevered in exploring it, and with an outlay of little more than 1000*l*, succeeded in discovering its wealth; and its continued riches offers an extraordinary instance of fortunate adventure. The mine is a very dry one, situate on the slope of a hill, and requiring comparatively little machinery to draw the water from it; the lodes are principally in granite, becoming profitless when they quit it and pass into the slate. Under different companies Tresavean has yielded profits amounting to upwards of 800,000*l*; and from 1814, to June, 1848, returned the enormous quantity of 307,970 tons of copper ore, yielding 1,879,735*l* 7s. 6d. From 1848, to June, 1849, the returns were 3459 tons, yielding 12,519*l* 4s. 6d.; from 1849, to June, 1850, 3178 tons, yielding 10,131*l* 3s. 6d.

The present company (in 96 shares, 10*l* paid up) have worked the mine about 20 years, and have cleared a profit of 449,352*l*. The highest amount of dividends paid in any one year was in 1833, when 630*l* per share, or 60,480*l*, were divided among the holders of the 96 shares, which rose in value to upwards of 2000*l* each. This amount of profit is more than was ever divided in one year, even by the Devon Great Consols. In 1834, 47,040*l*, or 490*l* per share were divided; in 1836, 500*l* per share, or 48,000*l*; in 1839, 32,000*l*; in 1840, 18,720*l* only; and from this time the profits gradually dwindled down, until in 1845 they amounted to 768*l*, or 8*l* per share; in 1846, 1400*l*; in 1847, 1848*l*; in 1849, nil; in 1850, nil; in 1851, a call of 10*l* per share was made. A new lease having been obtained a few years since, and new discoveries made of late, the shares have become more valuable since the call was made.

The machinery is valued at 10,000*l*, and consists of several steam-engines, &c., &c. The new engine-shaft, completed a few years since, is upwards of 320 fathoms deep from the surface, and took two years and two months sinking, by 12 sets of men rising and 12 sets sinking—in all, 120 men at the same time employed. On this shaft a steam-engine, with a cylinder of 86 inches in diameter, has been erected, which works nine lifts of pumps, and lifts 36 tons 6 cwt. per stroke; the weight of rods and sets-off in the shaft is 59 tons 13 cwt. 2 qrs.; the shaft main-beam, with gudgeons, bearings, and connections, 50 tons; eight plungers, 7½ tons; four balance-bobs, 60 tons; four balance-boxes, 80 tons; 75 fms. of flat-rods underground, 11½ tons—total weight of engine when in motion, 353 tons 16 cwt. The price of this engine delivered on the mine was 4185*l*. The size of the shaft is 12 ft. by 6, and cost upwards of 20,000*l*, sinking. A machine for raising and lowering the miners has been completed on this mine. It is the invention of Capt. Michael Loam, and is formed of two perpendicular rods of wood, having projections about 12 ft. apart, upon which each man, ascending or descending, stands. In the rods are placed long iron handles, which the men lay hold of with the greatest ease. As one rod descends, the other ascends, and at every alternate step there is a slight check, which affords sufficient time to enable the person travelling to remove from one rod to the other. The movement of these rods enable a man to travel about 100 ft. per minute. The machine is carried to a depth of 140 fms., and worked by a 36-inch double rotatory engine, acting upon two small wheels, which act upon two larger ones.

THE TRETHELLAN MINE

Adjoins Tresavean to the west, and is on the same lodes. The sett is small, being about 84 fms. in length. In 120 shares, 20*l* paid, present price 15*l*. Held on lease for 21 years (about 9 years expired) at 1-15th dues. Pursuer, Mr. W. Richards, Redruth. The mine first made returns of ore in 1837, and up to June, 1848, has yielded 30,160 tons of copper, selling for 120,391*l* 12s., out of which about 50,000*l* have been divided as profit. In some of her "palm days" Trethellan divided as much as 7000*l* a year. At present the operations are confined to picking out the ores in the different levels, and which occasionally leaves a small profit. The machinery consists of a steam winding-engine and crusher, &c.; the water being drained from the mine by Tresavean engine.

THE TREVISKEY AND BARRIER MINES

Are on the eastern run of Tresavean lodes, and also worked by means of Tresavean engine, and have yielded considerable profits. The Barrier, a small piece of ground about 5 fms. in width, dividing the sett from Tresavean, has been worked out. The mine is in 120 shares, price 250*l*, and since 1845 the following dividends have been paid to the shareholders:—

	Per Share.	Amount.
1846—Treviskey	£14 0 0	£1680 0 0
Barrier	2 0 0	240 0 0
1847—Treviskey	4 10 0	5760 0 0
Barrier	7 15 0	980 0 0
1848—Treviskey	17 10 0	2100 0 0
Barrier	9 0 0	1080 0 0
1849—Treviskey	26 0 0	3120 0 0
1850—Treviskey	73 0 0	8760 0 0
1851—January dividend	15 0 0	1800 0 0
March ditto	10 0 0	1200 0 0
Total		£26,610 0 0

WHEAL WALKER.—At the Exeter Assizes, on Thursday, a cause was tried, in which Messrs. Bayley and Fox, merchants, of Plymouth, were plaintiffs, and Mr. John P. Osborne, of Colchester, defendant, to recover from the latter a sum of 235*l*, for timber supplied to the above mine in 1846—the defendant being sued as an adventurer, and a verdict was eventually given for the plaintiffs. A long discussion ensued—not only upon the question of what is a "cost-book," but also what is the "Cost-book Principle," and Mr. C. V. Bridgman, of Tavistock, who was called as a witness, very ably expounded the principles and practice of the cost-book—or, at all events, what they ought to be, as applied to mines. According to Mr. Bridgman's views, all that is necessary to constitute a true "cost-book" is that the costs shall be entered therein monthly and consecutively by the pursuer, so as to show, at any meeting, the total amount expended up to that day. Mr. Crofts, the secretary of the mine, was also called to elucidate the question, and gave evidence, apparently satisfactory to the judge (Sir F. Pollock), that Wheal Walker had been, *de facto*, conducted on the pure Cost-book System, except that the mine had been allowed to get into debt for the sum in question. We understand, however, that this decision, although apparently adverse to defendant, is accompanied by mitigatory circumstances, and that probably the payment of costs alone will satisfy the plaintiffs.

NEW SOUTH WALES.—Mr. John Glasson, son of Mr. Glasson, of Nemeame, in the parish of Breage, Cornwall, who went to Sydney about 20 years since, and who now resides in Bathurst County, has been very fortunate in his purchase of a section of land there. We learn from good authority that he has found and opened on several copper lodes within his estate, producing blue and green carbonate and black oxide of copper. He has sunk on one of the lodes to the extent of 20 fms. from the surface, and has raised 100 tons or upwards of the richest ores. The same lode enters the estate of Mr. Lane, who has also raised about 100 tons of ore of the same quality. They have named it the Cornish district; and there is a great probability of its becoming a counter-part of the chief district in Cornwall—that of Camborne and Illogan.

MINING IN BREAGE AND SITHNEY, CORNWALL.—We are glad to learn that a good silver-lead lode has been discovered at Porthleven, in a cutting for a new road, leading from that village to the country residence of John Kendall, Esq., of Helston, and which is about to be worked, in conjunction with other known lodes, parallel to the lodes in the Penrose and Wheal Rose mines, within the lands of the Rev. Canon Rogers, which mines are known to the public as having yielded some hundreds of thousands of pounds worth of lead ores of the richest quality. The lode lately discovered is in width from 2 to 3 ft., and produces the finest specimens of gossan ever seen; and some stones of lead ore of excellent quality have also been taken from it. It has been traced for a distance of about 250 fathoms. The working of this mine will be a great boon to the inhabitants of the neighbourhood—many of whom are now in distress from want of employment. We are not yet in possession of the name by which the proprietors of this mine intend to designate it.

MINING IN MERIONETHSHIRE.—The following mines are about to be worked: CYFANNEDD FAWR (lead), in the parish of Llandynis, near Dolgelly. DOLFRYNOG (copper), in the parish of Llanfarche, about seven miles from Dolgelly. This mine came into notoriety from the singular fact of 9000*l* having, a few years since, been realised from the peat of its own bog, the ashes of which yielded from 2½ to 30 per cent. of pure copper.

CEFN CUM (slate quarry) is also about to be brought out under the Joint-Stock Companies' Act, with an efficient capital.

Original Correspondence.

LORDS' DUES IN WALES.

SIR.—The contrast presented in the mining districts of Wales and Cornwall has frequently elicited remarks from the attentive observer of surprise at the comparative inactivity manifest in the mining districts of the principality. The geological formations are very similar—the killas, or slate rock, alternating with limestone and quartz rock, with occasional beds of granite, and the mineral veins are known to be equally productive—Wales having the advantage of the greater declivity of her mountains to conduct mining operations with economy, aided by the numerous mountain torrents for applying power, and likewise an unlimited supply of coal disbursed in almost every district.

The London capitalist invests without hesitation in a promising adventure in Cornwall, although the first step there is a large outlay for machinery—a serious addition to the risk and continuous charges. And why should this be the case?—because he knows that, should his adventure be successful, the owner of the soil does not step in to abstract the lion's share of the profits, in the shape of an eighth or tenth, as in Wales; but is there content with receiving such moderate dues that shall ultimately, by encouraging the adventurer, be most beneficial to himself. I am satisfied the extravagant dues demanded in Wales is the chief cause of the want of capital in proving her great mineral resources, and that a reasonable reduction would produce a more than corresponding disposition to adventure.—BELL WILLIAMS: Liverpool, March 20.

A THIRD GLANCE AT THE GLOOMY STATE OF THE GWENNAP MINES.

SIR.—Allow me to point out an error or two in the United Mines statement, at page 111 of your last Journal. The ore sales, from 1st July, 1849, to end of June, 1850, should be 11,940 tons, yielding 49,832*l* 16s. 6d., instead of 11,910 43,832*l* 16s. 6d.; and from that period to 31st Dec., 1850, 16,498*l* 16s., instead of 18,498*l* 16s.—in both instances making matters worse than before depicted. I take this opportunity of assuring Mr. Watson, that so far from objecting "to the publication of mine dividends," it has ever been my object to give the fullest possible publicity thereto, and I shall ever be ready to lend my humble aid in furthering the same annually, monthly, and every week, as the columns of your Journal bear the proof for some years past; what I object to is the puffing advertisements (as at page 109), which "insure to capitalists the most safe investment, and will pay from 15 to 30 per cent." No one can "insure" any such thing; for, as I have shown, the mine paying dividends this year may be abandoned the next.

On the same page of your Journal, I perceive Mr. R. Symons, the surveyor, has handed you a long list of "knacked bails," besides two other communications respecting the "Names of Mines," and "Mining Tautology." Some of the "names" are (from an error in the press, I suppose) almost incomprehensible. What I wish most to notice, is the very cool manner he plans out the "knocking of the United and other mines adjacent," and the removal of the engines and machinery, with "population now dependant elsewhere"—viz., to Treskerby, North Downs, Hallenbeagle, Wheal Busy, and Wheal Chance. Mr. Symons, as a "planner," is master of his work, as I am ready to testify—slow, but very neatly put out of hand always. I much doubt, however, his ability to suggest anything regarding the "consolidation" or otherwise of this sett or that, or his judgment of which "would well repay the adventurers," amongst "the whole string of mines" he particularises, and says "should be consolidated." In his own words, then—

I do not think the consolidation of all the mines (enumerated) is a good one. If they will not pay respectively, what will make them pay collectively?—the mere union cannot do it.

I am inclined to think "the wish was parent to the thought," in the hopes of a surface surveying job in embryo. Even this is going rather fast, for his early experience in Mr. Wallis's office, the agent for Lord Clifford (the principal lord in United, as well as Great Consols), should have taught him that all mining leases contain very stringent and wholesome laws, one of which more particularly relates to the stopping of a mine. That due notice shall be given from adventurers to lords of their intention to stop or abandon the mine; the power of taking the whole, or any part they please, of the engines and working stock being reserved, and in the discretion of the lords to take, or not, at a valuation, to be fixed by two unconcerned persons—one to be chosen by the lord or his agent, the other by the adventurers so abandoning—which is very likely to be the case in this particular instance.

Mr. Symons must remember, that, about 10 years ago, the same lords and agents objected to renew the lease of Great Consols to Mr. John Taylor and party, and adopted this clause to possess themselves of that concern. Who is to say they shall not do so now at United? I suspect they will—undoubtedly they have the power—and when the extent of ground unexplored between sett and sett is taken into account, the great chance of cutting rich lodes and branches, offshoots of ore, &c., the whole economically wrought under one set of managers, instead of three or four, I cannot help thinking that it would be of the first importance to the interest of the lords (rather than allow United materials to travel over North Downs on Chance to be Busy, by engaging in the Treskerby consolidation, as projected) to take the said engines and effects at a valuation, and form a company something like that suggested.

I am borne out in my supposition by the acts of the lords and their agents; at my elbow, and in print, I have it emanating from the "special general meeting of the adventurers in United Mines, held at Queen-street-place, on Tuesday, the 25th Feb. last," from which I make extracts, to show, by facts plainly depicted, the true state of the case.

Mr. Andrew, one of the lords, hearing of the sudden and intended steps of the adventurers, promptly and prudently sent Captain John Davey, of Great Consols, and manager of Wheal Buller, underground at United Mines, to inspect certain parts, where his attention had more particularly been called to, the result of which is shown as follows:—

TO THE LORDS OF THE MANOR OF CUSGARNE.

Buwal, Feb. 22.—The bottom levels of United Mines I could not see, in consequence of water being in nearly as high as the 194 fms. level. The 194, east of Hawke's shaft, on the north lode, is driven a few fathoms through a large lode, which is likely to improve in depth; west, this level is extended some fathoms through a large lode of a very peculiar character. Hawke's shaft is sunk to the 208 fms. level, where they have driven nearly far enough to reach the lode; and in the present and they cut a large stream of warm water, which has drained the whole of the upper levels on this lode for a great distance. Such indications as these, if followed, have scarcely failed in this and the Consolidated Mines of leading to a great bunch of ore. The dry season is fast approaching, and there is no doubt but that the water will decrease shortly. I would advise that every possible force that can be employed should be used in these parts of the mine, and that the 180 fms. level west, on the middle lode, be driven immediately.—JOHN DAVEY, Sen.

Mr. Andrew, under date 24th Feb., 1851, addresses Mr. Richard Taylor on the subject, and after calling his attention to the report of Captain Davey, thus observes—

The lords feel that undue precipitancy is being used on the part of the adventurers in the steps they are taking with a view to endeavour to close so important a concern, and cannot reconcile to themselves that a temporary difficulty, such as an unusual influx of water, capable of being removed (as is admitted by the agents) within a very short time, justifies such a course. The lords have also to submit, for the timely consideration of the adventurers, how far the terms of their sett admit of the abandonment of the mines; and although I feel assured the lords would most reluctantly have any legal reference to the provisions of the sett, yet, if the adventurers should, at the meeting on the 25th, determine to abandon the mine, it will be incumbent on the lords to ascertain how far the adventurers are justified in doing so—feeling, as the lords do, the important nature of the property, and that the mine is fully deserving of further prosecution.—H. P. ANDREW.

The result of which is, they

Resolved unanimously.—That this meeting is convinced, by the reports from the mine for the last six months, that the prospects of any future profits from continuing to work them are extremely uncertain, and that the expenses occasioned by recovering the mine from the consequences of the recent influx of water offers a proper opportunity of abandoning them, as far as the interests of the adventurers are concerned. In order, however, to meet the views of some of the adventurers, as expressed by Mr. M. Williams, and also to give the lords an opportunity of deciding upon the course which they may think proper to adopt with reference to taking the machinery under the provisions of the sett, and to satisfy them that the adventurers are not disposed to abandon until every reasonable trial has been made, this meeting authorises the agents at the mines to use their utmost endeavours to drain the mines, and to work them, as heretofore, for the next two months. (Signed) DAVID JARDINE, Chairman.

Let, then, the water be forked, and a proper inspection made, whether the water is taking with a view to endeavour to close so important a concern, and cannot reconcile to themselves that a temporary difficulty, such as an unusual influx of water, capable of being removed (as is admitted by the agents) within a very short time, justifies such a course. The lords have also to submit, for the timely consideration of the adventurers, how far the terms of their sett admit of the abandonment of the mines; and although I feel assured the lords would most reluctantly have any legal reference to the provisions of the sett, yet, if the adventurers should, at the meeting on the 25th, determine to abandon the mine, it will be incumbent on the lords to ascertain how far the adventurers are justified in doing so—feeling, as the lords do, the important nature of the property, and that the mine is fully deserving of further prosecution.—H. P. ANDREW.

Another fact is, even supposing United was to stop, there are no less than five sets of executors representing the interest of proprietors deceased—all these cannot consent to a removal, if any of them do. A public sale, by auction, would be inevitable, and the effects submitted to open competition—thus upsetting the removal of all in one fell swoop, as indicated. I believe there is no communication between United and Consols Mines above the 70 fathom level; therefore, should the western levels at the latter continue to improve, it might be the pleasure of those adventurers, through the medium of the lords, to take the former sett, and such engine, or engines only as might be necessary to keep the water in fork under the 70 fathom level, for the protection of the other mines; in doing which they undoubtedly would explore, by cross-cuts at various levels, the high ground standing all or in whole between the sett; and where is the miner that can say such a step would be injudicious?—especially when the great and numberless chances of success it offers is pointed out to

SIR.—I beg to assure you that the above is a true and correct copy of the original as it appears in the Cornwall Mining Journal.

him. One thing is certain, however—i. e., money must be expended in either case; and I boldly assert, that it will require quite as much to remove United materials to "the great northern extension" contemplated—draw out the water, and bring "the whole string of very eligible mines" into a proper working condition, as it would to effect the grand object I suggested as a permanent trial of United, Consols, &c., under one management.

I candidly acknowledge, that should a public sale and removal ultimately ensue, I know of no spot more deserving a large outlay and vigorous prosecution than that named, and should like to see them placed there for such a desirable purpose. On four several occasions, during the last 25 years, when I have been consulted, and requested to recommend an extensive run of mines to those prepared to work them, I have named Treskerby to Chacewater, and thence north beyond Blackwater, which includes more ground than the sets Mr. Symons specifies.

In conclusion, I beg to add that I am no partisan, having no personal interest to serve, or benefit to receive in the remotest shape, neither am I directly or indirectly connected with either company. When I first took up my pen to record my views of this important matter, I had not the most distant idea that it would require a third communication from me; still, as one of Cornwall's long-famed and most productive copper districts, I could not hear its requiem sounded in so abrupt a way as Mr. Symons and others (from whom he elicited the idea) appear to have made their minds up to with more haste than speed. At foot I transmit you the Gwennap portion of this day's sampling; it is too melancholy to further comment on by—

ARGUS.

Truro, March 12.

Great Consols sampling.....Tons 558—a further decrease of.....	13 tons.
United Mines ".....	490 ".....7 "
Trevilley ".....	425 ".....60 "
Trethellan ".....	90 ".....24 "
Total.....Tons 1563	104 tons.

Nearly 7 per cent. less in quantity.

MINES AND MINING—TRADITIONS AND LEGENDS.—No. III.

RESPECTED FRIEND.—I send the following extract from the third chapter of my *Parochial History of Mining in Devon and East Cornwall*, which is preparing for the press:—

"Having in the former chapters referred to the histories of Bede, Geoffrey of Monmouth, William of Malmesbury, the monks of Tavistock, and others, which are by some considered fabulous, I purpose in the present to devote a little space to the legendary tales, which, though now becoming obsolete, yet, some years ago, were implicitly believed in many parts of Cornwall and Devon. One of the most prominent is connected with the idea of the 'interposition of Providence' in favour of the tinners; and here I have reason to think 'the Druids' taught the early tinners this doctrine, connected with a sort of fatalism of good and bad luck. The Druids left no writings that I can discover; but the reference to them by the earliest of our chroniclers gives us the idea that these opinions were a part of their creed—hence the prevalence of those notions to the present day; nor have the various changes of religious opinions much altered the ideas of the people generally on those matters."

The tradition to which I refer was communicated to me by an old tinner with a good deal of sincerity and reverence, who had received it from his grandfather, and I here give it *verbatim*:—"God in the beginning of the world was determined to have men of all trades and callings: and though there were no 'deep bals' in Cornwall so early as some other places, yet He had great pleasure in the streamers; and, in order to afford them a good deal of labour, 'He showered the tin from Heaven'; therefore, the stream tin is nothing like the tin raised out of the lodes, but much superior—being *sell*, or grain tin."

I confess this tradition, though communicated to me many years ago, has occasioned much reflection on the subject of the "Formation and Structure of Lodes and Veins;" and the conclusion I have come to is that this tradition is deserving of attention. Let us look to the geological character of the Tavistock district—the tin streams of Dartmoor for instance; and here I may remark that, though at present there is very little doing in streaming on Dartmoor for tin, yet one is astonished to notice the amount of labour done by the ancients. Nearly the whole of the great granitic range of Dartmoor is surrounded by evidences of "volcanic operations;" and it is acknowledged by the most eminent geologists that the hills, south and west, are particularly so. I had the pleasure, many years ago, of examining these hills, in company with Sir Henry De la Beche, from whose extensive observations on these subjects I derived considerable information. Now, the tradition says "He showered down tin from Heaven." May this not have been the showers of volcanic matter from the eruptions? and may not this matter have been tin ore in the state it is found in the streams? No doubt it is very necessary for me to say here that "exceptions" may be taken to these sentiments—such as "that the streamers rarely find any scoria or lava," such as is found at the foot of Vesuvius, or any other modern crater. I am ready to acknowledge this; nevertheless, I am inclined to think that the idea is grounded on great probability.

On this principle I would venture an opinion, in reference to the gold found in the diggings of California and other places. From the accounts sent me by my son, who has been, and is very successfully, engaged in gold diggings in California, it is very probable these scattered deposits of gold, to use the words of the tradition, were "showered from Heaven"—that is, by volcanic eruptions. But let it not be supposed that I think there is no portion either of the tin ore found in the streams of Devon and Cornwall, or of the gold found in California, which proceeds from lodes. On the contrary, I know there are considerable portions of the ore found in both cases, which have been washed or removed from the upper parts of lodes, or veins, as the nature of the strata connected with the ore is very different; yet it is very remarkable that the quality of "stream tin" is very superior to mine tin—the former being, for the most part, capable of easy granulation, or grain tin; whilst the tin derived from mine tin ore is chiefly common tin, with a small portion of refined.

As my ideas on the subject of lodes are in another chapter, I shall only now notice one or two striking matters connected with "ore" in streaming. It is a well-known fact that hard yellow copper ore is frequently found in lodes dropping quite up to the surface, yet we never hear of copper streaming. I am aware that this may be accounted for to some extent upon the principle that the ores of copper are sooner operated upon by other causes; and this will apply to lead, to silver, and other ores; and though there may have been slight exceptions to this as a general rule, yet the fact is undoubted, as far as I am acquainted, at least in Devon and Cornwall; whilst in regard to gold and tin, the greatest quantity of the former (perhaps, I ought to except the Egyptian gold mines of very ancient date), and a considerable portion of the latter, are obtained from the process of washing the debris of the sides of hills and valleys.

Tavistock, 3 mo., 18.

JOHN PAULI, Mining Engineer.

ON PERRAN ST. GEORGE GRANITE.

SIR.—I am highly pleased to see that Capt. Pill, of the St. George Mine, has replied to my remarks as to its distance from granite, which bears out Mr. Watson in his "Compendium of British Mining." It is also useful information, if duly attended to. Capt. Pill's reply clearly decides the question as to granite being there, and also that a quantity of tin and copper is found in it; and they are at present raising a large quantity of copper within about 40 fms. of granite. It also proves that the eastern part of the mine, that returned such an immense quantity of copper when worked by the English Mining Association, and even Wheal Leisure, is near this second discovery of granite, as is also Wheal Prudence. I am not surprised at the granite overlapping the clay-slate, though most geologists argue that granite is the primitive rock, and is overlaid by clay-slate; but this is not at all times the case. I have noticed it before, which caused me to ask the question.

Since this granite question was commenced, a friend has sent me the *Manual of Mineralogy*, where I find it remarked in the introduction (page 6), "That Wheal Coates, near St. Agnes' Beacon, or hill, is in granite, and running in an eastern direction towards Clegga Head, or St. George Mine, and also on westward, which brings it within a very short distance of Wheal Towan and Wheal Charlotte." This clearly bears out my former remarks, as to there being a run of granite stretching from Clegga Head west under the sea, which caused this lode to appear to be so productive in tin and copper. The riches of these lodes appear to be dependant on this north run of granite, and not on the Red-ruth granite, as we find a barren unproductive channel of clay-slate lying between them. I am extremely obliged to "Argus" for making the first remark, and hope he will not think me intruding when I ask him to point out the most distant copper mine he knows of in Cornwall from granite that ever paid 10,000l. profit. On his doing so, I will endeavour to point out some in the east of Cornwall and Devon, which will give others the chance of confuting us, by pointing out where we err.

Had it not been for our discussion, Capt. Pill's useful remarks might have remained buried in oblivion. It is a grand point gained to know if granite is at all times found near productive copper lodes, more particularly when it makes no appearance at the surface. Will some kind friend of the igneous school give his theoretical opinion, and tell us if he thinks this hidden granite was the last act of that terrific age when a sudden change of temperature stepped in and stopped its rising power? or will some desecrator from that goodly school, who has imbibed more recent views, tell us if it is only a crystalline rock, and still working under Nature's laws, and slowly progressing on? or how the decay of Nature is acting on it, so as to destroy its upper surface, and turn it into clay? These patches, dykes, and layers, give us fine opportunities for taking their exact thickness at well-defined points, which should be engraved on stone, and kept in the parish church for guides for the rising generations.—N. ENNOR: *Wiveliscombe*, March 20.

"A GOOD BAL MAKES A GOOD CAPN."

SIR.—I beg to inform "R. S." that I quite agree with him. The laws of Nature tell us all men are fallible, and all theories are true or false, and mining is a hidden thing; but would remind him that I am not a share jobber, nor in want of a situation. My only object in making my remarks was to try to arouse Cornishmen, "one and all," to come forward and endeavour to make

mining more a scientific attainment. "R. S." must be aware that it is not a very enviable situation to come out weekly in a public Journal; no man can do it with any advantage to the public without occasionally making remarks that amount to personalities, which lays him open to be attacked by them and their friends; be this as it may, I do it fearlessly, and never come out under a cover. Knowing my inability, I should be extremely sorry if not found very far in the rear of the scientific men of Cornwall. I am sorry to see "R. S." so inclined to quarrel thus early; had he been neutral until my remarks on lodes and mining were published, I should have given him ample scope to have done so. Why quarrel? Sound reasoning is the railroad to truth, which would aid us in exploring the bowels of the earth, to find materials for the exercise of inventive genius. To conclude, I say—Man, govern thy temper; spite only destroys wit.—N. ENNOR: *Wiveliscombe*, March 18.

NORTH WHEAL ROBERT.

SIR.—In your last Number appears a notice of a mine meeting held by the adventurers in North Wheal Robert, at which, as it is stated, a resolution was passed, condemnatory of the purchases made by the pursuer, inasmuch as that he had not used that discretion in his purchase of supplies consistent with his duties. Now, Sir, as the pursuer, confident in his own probity, and determined to counteract the effect of private intrigue in mining adventure, is resolved not to be imposed upon, he begs leave, in *limine*, to proclaim that he has never given an order unsanctioned and unsuggested by the agent (than whom there is not a man more honourably prudent); and, further, that he is determined to defend his character from being scooped for the sake of private interest, or perverted to suit individual purposes; that he is decided on claiming, under the paragraph of the prospectus of North Wheal Robert Company, providing that a special general meeting shall be summoned for the superseding of an agent, the right of defending himself from official assumption, private intrigue, and that selfishness, which, in too many instances is, and has hitherto been, the bane of fair British mining. PURSER OF NORTH WHEAL ROBERT.

Tavistock, March 19.

ANONYMOUS COMMUNICATIONS REGARDING MINES.

SIR.—In consequence of a letter from myself, inserted in your last Journal, on the subject of several cautions (anonymous) as to certain mines near the Land's End (in the parishes of St. Just and Sancered), I have been waited on by the parties interested in the said mines, who aver, and I believe, on honest grounds, that they court such inspection as would establish either their value or worthlessness. I feel it but just, however, to the adventurers in those mines, in the interim, to call upon the writers of the anonymous letters in question to disclose their names, and meet the question they have raised, as become all business men, in a bold and open manner. Should they not, however, respond to this call, I fear they must be considered as resting under the imputation of unworthy motives, or jealousy, in the circulation of mere innuendo.

King-street, Cheapside, March 21. J. CROFTS, Mining Broker.

INSPECTION OF MINES—ANONYMOUS CORRESPONDENCE.

SIR.—It is not over agreeable to be called into print, the more especially in reply to anonymous communications; but Mr. J. Crofts has called me out officially respecting two speculations, the affairs of which are conducted at my office by a few gentlemen of some little respectability. I allude to the innuendoes respecting Wheal Augusta, and East Ballewidden Mines, "so called." It would appear great civility on the part of a "Lover of Fair-Play," to write Mr. Crofts such notes of warning; but a moment's reflection, will determine it more insulting to Mr. Crofts than civil, as it is not probable Mr. Crofts would recommend investment in an old mine, or speculation in a new mine, without data—the result of some inspection, as advised by this ardent "Lover." The wisdom of a respectable broker making public such anonymous *billet doux* may, I think, safely be questioned, as it is possible that such a cowardly mode of communication may be made the vehicle of personal animosity against a particular individual; and, without attaining perhaps its end, is nevertheless calculated to annoy others at a distance, unknown to the writer, who, innocent of the cause, suddenly find their interests materially injured, without possessing the safeguard of a legal remedy.

I, too, am a lover of fair play, and, with your permission, will state a fact or two for the information of the curious in such matters. A tin stone from Wheal Augusta has just arrived at my office, in Winchester-buildings, en route for the Exhibition. This is a "great fact," of a quarter of a ton weight. Can this "Lover" draw an inference as heavy? It is a pretty little stone, and the public are invited to inspect it, prior to its removal to the World's Museum.

There is another more agreeable fact than this—viz.: there are a good many more stones like it in the mine "so called." The "Lover's" caution is somewhat premature with regard to East Ballewidden, as the mine ("so called") is scarcely yet unwatered, the surface erections being only just completed; but it is probable that reports of both mines will appear in your next Number, and will speak for themselves. In my love of fair-play, I may mention that the mines and books are always open to the inspection of the adventurers, or their agents; and you are yourself aware that your own representative has free access to the report books, from which he transcribes *verbatim* the reports, whether good, bad, or indifferent; and if the anonymous "Lover of Fair-Play" will disclose his name and address, I will undertake that he shall have ample opportunity for inspecting the "so called" mines, in which he seems so intensely interested. From the correspondence, however, I am led to the conclusion that his suggestions are really the result of an obliquity of vision in his judgment of the agent, Capt. J. Carthew; if so, the speedy translation of the would-be-patriot from the atmosphere of St. Just to that of St. Generous, might prove highly beneficial. I await the name and address of the "Lover of Fair-Play."

T. A. READWIN, Secretary to the "so called" Mines.

P.S.—Since writing the above, I find that Mr. Crofts is not the only broker who has been favoured with the "Lover's" attentions. I have seen one of the letters, bearing the *Pennance* post-mark. The possessor has identified the handwriting with that of an inhabitant of Pennance, who was for 12 years in correspondence with him, so that it is probable proof of authorship is close at hand.

SWANSEA TICKETINGS.

SIR.—Your anonymous correspondent, "Miner," states, in last week's Journal, that his authority for his statement, with reference to the loss of silver in Chiff regulus, was Mr. Bath. What Mr. Bath he refers to I know not: this much I do know, that what he has stated is not true; and that neither my father or myself, the only members of the firm of H. Bath and Son, ever made such a statement.—HENRY J. BATH: *Swansea*, March, 19.

MINING IN STAFFORDSHIRE—ADVENTURERS' SQUABLES IN ADJOINING SETTS.

—In an account of a "Cornish Miner's Ramble," given in the *Mining Journal* of 8th February last, it is noticed that the adventurers in the New York Copper Mine, near Leek, in Staffordshire, were under agreement to keep the water from the Roylage Mine adjoining, and that there was a dispute between them, by which many thousands of tons of ore had been prevented being raised, and the interests of both greatly injured. It appears that these deprecating quarrels have at length been ended by an appeal to the law. The case, Williams v. Marsden and others, was tried at the Stafford Assizes on the 14th instant. It was an action brought by plaintiff, as the lessee and occupier of the New York Mine, situate at Elkstone, near Leek, to recover 309l. upon an agreement, dated 16th March, 1849, by which the defendants, the occupiers of the Roylage Mine adjoining, agreed to pay one-half the working cost of a steam-engine, erected by the plaintiff for draining both mines. It was proved by evidence that the engine was quite equal to the work; and that, since its erection, both mines were kept free from water, and accessible to work in all parts. The defendants contended that the erection of the engine was of no use to their mine, but that it was drained by machinery they had themselves erected; and that they were not bound to pay, unless it could be proved they had received the intended benefit from its erection. The jury found a verdict for plaintiff; damages, 309l.

MAP OF SUNDERLAND.—We have received a very excellently lithographed map of the town of Sunderland, comprising the townships of Monkwearmouth, Bishopwearmouth, Deptford, Southwick, and the surrounding suburbs, from a trigonometrical survey by Messrs. Thomas Meik and Robert Morgan, engineers, and published by Messrs. M. and M. W. Lambert, Newcastle-upon-Tyne. In addition to the usual accompaniments of a local map, it is covered by a series of contour lines, giving the varying height above high-water mark at every 5 ft. of surface—a feature which must prove of great utility to architects, surveyors, and builders in the district. The names of the wards, streets, squares, quays, &c., are distinct and bold, and the sheet is got up in the best manner, on canvas, varnished and bound, and will be found highly useful for reference.

IMPROVED FIRE-BARS FOR FURNACES.—RAILWAY SLEEPERS.—A patent has been secured by Messrs. Cochrane and Francis for a new furnace bar. They are formed of a V or U shape, the hollow being filled in with fireclay, mixed with sand or ground fire-brick, to prevent shrinking; or fire-bricks of the exact size are cast to fit the opening. Also for a railway sleeper, formed with a base-plate, with longitudinal ribs and recesses, to admit the feet of the chairs, which are kept in position by a block of wood; the rail is secured to this block by wedges and keys.

LUMPS OF CALIFORNIAN GOLD.—Lumps of pure Californian gold, so rare only a short time since, are now becoming plentiful in the shop-windows of the Liverpool Jewellers. Messrs. Roe and Jacob, of Waterloo-place, Church-street, have been exhibiting in their shop-windows during the last few days three large lumps of the pure metal, which they have received direct from San Francisco. Two of the pieces are solid and of great purity, but the largest consists of a number of pieces, which have been rudely hammered together. The value of the three golden lumps is about 108l.

MINING IN CARDIGANSHIRE.

ALL-Y-CRIB.—We have now been at this old work for a period of 18 months. Backed by the best authority, in the shape of ancient records, we considered that we could not miss to lay open a fair mine. Our first object was to open into the rock surrounding the vein, to make sure that nothing of value should escape us. In this intention we were more fortunate than we could have anticipated, as we laid open ore ground on the sides of the old workings, varying in value from 6l. to 36l. per fm. We also discovered a run of ore ground continuing westward beyond the old workings from the deep adit. We then lost no time in erecting a good water-wheel, with buddling and dressing apparatus, and in about 12 months got ready our first cargo for sale. Our sales are now about 350l. a month, and our cost is about 230l. to 240l. Of course, the mine has not arrived to that state of working or extent that will enable us to take full advantage of the ore ground, as all of it below the deep adit, which was the principal source of the old miners, is still under water. Preparations are making, with all the possible speed, to apply pumping-power to unwater this ground, for which a provision was made in the power of the great water-wheel, and in a very short time we shall have the great body of ore of the old miners at our command, which the old accounts agree in representing as rich; but we have stronger evidence of this, in the fact that the old miners, by dint of hard labour, followed down this course of ore for 40 fms. under their adit, and 20 fms. below the bed of the river—an achievement that, in the present day, would be considered next to impossible, and as, I think, affording a very strong proof that the ore must be good, as nothing else could have paid for the labour of raising the water and ore to such a height. A very important feature in this mine is the western portion of the grant. The deep adit level now has a back or height over it of 80 fms. perpendicular, and it will maintain this height for about half a mile in length, now the whole surface of this hill has been excavated for lead to depths unknown by the ancient miners. The eastern part of the ore ground has continued down far below the river. Should we find the western ore ground before our deep level continues in depth for the length we see it wrought on the surface, we should have one of the largest mines in the neighbourhood. The stopes at present in the western workings, near the end of the adit, yield 3 tons of lead ore to the fathom, which affords ground of strong encouragement with respect to the lode still further westward. Specimens are forthcoming to the Crystal Palace.

BVLCH CONSOLS.—The 55 fathom level, driving west of Doran's shaft, is not productive of ore at present, but the lode is large, and no doubt will shortly again reach ore ground. The 45 and 35 fms. levels continue to yield large returns of ore. The tribute ground and stopes continue to produce good quantities of ore, and the profits are steady and considerable. This mine has now recovered from its difficulties, and there are good stores of ore ground laid open, amply capable of maintaining the present returns.

BROXFLOYD.—We have ore ground discovered in this lode by two adits, about 100 fms. from each other, lengthwise on the lode. In the lower adit the lode is ore for a width of 7 or 8 ft., yielding about 15l. worth of ore per fm., upon which we have opened for a length of about 10 fms. In the upper adit the ground is working upon tribute at 5l. per fm., worth about 15l. per fm., and the men are doing very well. We are not sure whether the ore in the lower adit is the same as that 100 fms. to the westward in the upper adit; it would appear that it is so from the nature of the ground; and, should this prove to be the case, it must turn out to be one of the finest deposits of silver-lead ore now working in Cardiganshire. Specimens are forwarded to the Crystal Palace.

CAE-GYNON.—In sinking upon the discovery of ore ground, on the surface of the south lode, we find the blende diminishing, and the lead ore increasing in quantity. We have now reached about 4 fms. below the surface. The lode is ore for a width of 7 ft., and, from all appearances, will settle into a valuable body of ore ground below; but at present the ore is a great deal mixed with gossan, and is very soft and loose for breaking; but I expect in a short depth below the lode and country it will become settled, and that we shall find solid blue ore to take the place of the gossan and carbonates. On the north lode the adit is driving westward upon a fine lode of silver-lead ore, from which we have raised several tons. We are making the water-course to the wheel; and, as soon as we have completed it and our machinery, we shall be able to give a fair profit—say, 1000l. per year to commence with. This mine lies at the foot of the north bank of the river Rheidol, with the full volume of the Rheidol to apply for driving machine-power, if necessary; while behind the mine the lode runs into a hill of fully 1000 ft. in height; and bodies of ore are discovered in places along the lode running into this rising ground. There can be little doubt but that this most favourable mining locality will produce results as great as the most sanguine would predict from its apparent advantages. The valley of the Rheidol has not been much disturbed by miners in modern times, although some of the largest mining works of antiquity were carried on in it; and it would be well for this part of Wales if this famous valley were reanimated, and that it should again be made to resound to the implements of busy industry. Specimens of this ore will be forwarded to the Crystal Palace.

ESGAIR-HIR.—We are stripping down the sides of the deep adit, and find a course of ore by the north side of the old works, turning out 3 tons per fm. At present it is impossible to say the real value of this mine, but that it is one of the best properties in Cardiganshire is beyond doubt. Specimens are forthcoming to the Crystal Palace.

GROGWYNION (lead).—I beg to forward you some account of the progress making in opening this famous old lead work. It will first, perhaps, be worth while to give some description of the mine itself. Grogwynion Mine is situate on the north bank of the River Ystwyth, about 10 miles from Aberystwyth, and about three miles below the celebrated Logllys, or Level Fawr, one of the Lisburne Mines. Its appearance, caused by ancient open cuttings through the crest of a high rock, consisting of a channel of vertical slate, and elevated 100 fms. above the bed of the river, is very romantic. This channel of slate is nearly at right angles with the bed of the river, and rises to almost an equal height on either side, and although the slate of this ridge is more indurated than the surrounding country, the river has made its channel so fairly through it, that not a mark of it is to be seen in its bed; this elevated ridge gives the hill something the form of a saddle, the centre rising as a pommel, and the sides curving off as do the flaps. The highest portion of the rock is worn by tools and time, and various Roman levels run into it in places below, giving the whole a gnarled or knotty appearance. The vein in passing through this upper escarpment is divided into three portions or branches, running several yards apart, and the refuse rock is flung loosely along the back of the lode along the surface of the hill for a length of 300 fms. This is from the main vein, but there are other lodes, the principal of which is called the north lode, 80 fms. further northward, and this vein falls into the main vein at the depth of 130 fms. below the surface, 30 fms. below the great adit, and 25 fms. deeper than our workings have yet reached. Our operations have been directed to opening and making thoroughfares through the old workings, which are so extensive that they appear like labyrinths without end, but we have now ladder roads and drifts open from the bottom of the mine to the surface. We have also cleared up the workings on the north lode, risen some very fine ore from it, and sunk a 12 fm. sump, and are now driving under the old ore ground, where we expect a good deal of ore; but this is only a pioneering trial, as our deep adit will cut this lode 80 fms. below our yet lowest workings. On the main lode we have got down to the bottom of the old workings, and in the lowest sink under the adit we find a very good course of ore, worth about 10l. per fm. The end to the eastward is driven about 70 fathoms beyond the great level, or rather where it intersects the lode; the lode has been worked for ore to within a few feet of the end, and this ore has been dug upon below the adit, but nothing of any consequence has been done here; 20 fms. above this a level runs away to the eastward, called by the old men the long drift (which appears to be a pretty good name for it, as no one seems to know where the end of it is to the westward); along this long drift the bottom is dug up in sinks for ore, the arches between showing masses of beautifully solid ore. The eastern end of the long drift is left in a course of ore, 6 in. wide, solid; 70 fms. higher up, which is at the surface, and 30 fms. before the end of the long drift, we have cleared up an old sink, and found a very good course of ore. We may, therefore, calculate that in the eastern part of the mine we have a fair prospect of finding something to do for the smelters. In the western part of the mine the adit is driven 10 fms. west of the main cross-cut or deep adit upon the lode; the lode is in this place carried to the northward by the channel of slate alluded to; we are driving in that direction to recover it a few fathoms to the west of our end. The main lode is seen to continue in a bearing state for a distance of nearly 200 fms., under which ground our main adit has to pass, and from all appearances it is likely to open a great range of ore ground. The lodes in this mine are fructified in irregular deposits of most beautiful potter's ore, principally in cubes; in some places the lodes are filled for 6 in., and in others to several feet in thickness, and although the lodes are charged in patches or bunches they are yet so continuous that the bearing ground may be said to continue for hundreds of fathoms, and to a depth as yet not ascertained. Specimens of the ore will be seen at the Crystal Palace.

RHYD HALOG.—Notwithstanding there are a great many silver-lead mines in Cardiganshire, there are very few silver mines. It happens that those mines that are grouped upon the Llanfair Clydogan veins may, with propriety, be called silver mines. The produce of their ores being 80 ozs. of silver and upwards to a ton of lead, it follows that, if the lead is worth nothing, yet the silver would be worth fully 15l. per ton. Having ascertained that the Rhyd-Halog vein yielded an ore of this description, and that two cargoes of it were raised from very partial workings, it appeared to me a judicious proceeding to take a grant and form a company to work it, more especially as the cost would be only trivial—the shaft being only 25 fms. deep, and the levels extending but a few fathoms from it, and there being a very good stream of water running quite convenient for the application of machinery. We, therefore, accomplished the getting the grant and the formation of the company, and are now about to erect a water-wheel of small diameter, for the purpose of taking the water out of the old mine, and ascertaining if such course of ore as the old

Mining Correspondence.

BRITISH MINES.

men describe really exist. We are told that the lode yielded upwards of a ton to a fathom for the ground taken away; but we shall be perfectly satisfied if we can succeed in finding a course of ore worth one-quarter of this value; and I beg to receive this thus early to the shareholders, as this would be worth 6d. per fm. and give us very fair profits.

SOUTH LISBURN.—These trials are carried on upon a very large and champagne-like lode, running through the upper section of the ground surrounding the channel of the Teify, from near its source in the Teify lakes, to several miles below, in the neighbourhood of the village of Penrhynfynydd. The vein is well known, having been partially opened at Bronerllan, Bryncreach, and Brynhope—the point we have singled out for our attack, and which we have christened South Lisburn, from its being directly south of the Lisburne Mines, and perhaps in some measure from an imagining of miners, that when they borrow the name they may by chance borrow a portion of the luck also; for this reason, no doubt, you seldom hear of a miner of much discrimination choosing an unlucky name for his adopted; be this as it may, the whole surface of this large lode, where it has been dug up, shows a considerable quantity of metallic matter. At Bronerllan, large masses of solid lead, mixed with a fine quartzose gossan, were found. In Bryncreach, the eastern part under the peat bog, solid courses of lead ore were found, free from gossan. At about 6 fms. deep the lode settled from a ferruginous mass near the surface into a branch of good mixed lead ore, 6 or 7 in. wide, and in our trenching on South Lisburne (for as yet we have done nothing but trenching), we have found at the depth of 5 or 6 ft. deep, for 60 or 70 fms. long, tons of lead ore mixed with a very fine gossan. Our intention is to sink a shaft into the lode as deep as we can go for water, to try the nature of the vein at a greater depth, and, if favourable, to apply a small water machine to follow it down until, as we hope, we may fall in with a body of ore that will remunerate us for the necessary machinery for converting the raw into a saleable material in large quantities; and I really think that we shall succeed in doing so.

EAST WHEEL RUSSELL AND SURROUNDING DISTRICT.

The following report from Arthur Dean, Esq., civil and mining engineer, has been addressed to the committee of management of this mine, and as considerable diversity of opinion has been expressed respecting the sett, we print it in *extenso*:—

The sett is bounded on the west by Wheel Russell, on the north-west by Bedford United, and on the north and north-east by Wheel Crebor copper mines, on the south-east for a length of 670 fms. by the Tavistock Canal Tunnel, and on the south by the canal. Good roads connect the mine with Morwellham Quay, on the Tamar, distant only one mile, from whence timber, coals, &c., can be readily obtained, and the ores shipped at a very moderate cost for carriage. The narrow granite ridge which appears at the surface, on the Cornish side of the Tamar, and forms the crest of the elevated ground called Heignton Downs, in its course eastward dips beneath the superincumbent kyllas, or clay-slate formation, and its effect in elevating the lower beds may be traced by an anticlinal axis, bearing a little east of north, from which they fall off on either side, in opposite directions. Many of the beds, on the northern slope, in which the Bedford United and Crebor copper lodes have been most productive, by this arrangement of the strata, are repeated on the southern slope, and are there also traversed by the Wheel Russell and East Wheel Russell lodes; the canal tunnel, 1300 fms. long, and, at the south-eastern extremity of East Wheel Russell sett, 100 fathoms deep, pierces the hill from side to side, and affords a rare opportunity for observing the characters of the strata and lodes to be met with in the sett, and into which I have traced 11 of the lodes.

Commencing at the southern end of the sett, the first three lodes are not of much promise; the fourth, called the Holme and Beam lode, which the mine has been opened, is a magnificent lode, and the remaining seven, which lie north of it, are well worth exploring, although no works have as yet been executed upon them. The Holme and Beam lode, to which my remarks will be chiefly confined, runs through the sett for a length of nearly 500 fathoms, bears a few degrees south of east and north of west, and underlies about 1 foot in a fm.; at the western extremity of the sett, a few fms. north of this lode, and on the east side of No. 1 cross-course, there is an elvan course, with a north underlie, which bears about 20° south of east, and is intersected by the lode at a very acute angle about 15 fms. further east, from which point it is south of the lode; as this elvan course forms the hanging wall of the lode at Hitchen's shaft, where the workings have been commenced, it has been generally supposed that the lode and elvan accompany each other throughout the whole extent of the sett, and on the Ordnance Geological Map of the district they are so represented for a length of 1½ miles; many persons have also imagined that the lode is not a true lode, but an elvan lode, or part of a mineralized elvan course; and I only refer to these opinions because they have been somewhat widely disseminated, and are not founded on fact. Had the lode and elvan course continued to extend east without interruption, their backs at the eastern boundary would have been about 50 or 60 fathoms apart at the surface, and they would have intersected each other in depth at about 30 or 40 fathoms; but at 210 fathoms from the western boundary they are intersected by a cross-course (No. 2.) bearing about 30° east of north, and underlying east 2 feet 6 inches per fathom, by which the elvan course is apparently heaved 120 fathoms south, and the lode about 7 or 8 fathoms north. Again, another cross-course (No. 3.), at 290 fathoms, heaves the elvan 30 fathoms still further south, and the lode, it is supposed, a little further north, so as on arriving at the eastern boundary their backs are upwards of 200 fms. apart, and they will not intersect each other in depth at less than 100 fms. beneath the surface. The average underlie of the elvan course, east of No. 2 and 3 cross-courses, is nearly 18 fms. per fm.; this inclination is not uniform, as the elvan is very flat near the surface, but dips at the rate of 6 fms. per fm. north, where seen near Bray shaft in the tunnel, at 90 fms. beneath the surface, and where, also, the Holme and Beam lode is 15 fms. north of it, with a "horse" of kyllas between them. It is quite impossible to account for the dislocations just recorded by the ordinarily received theory of heaves prevailing in the west of England, which supposes, where a lode is heaved by a cross-course, or other intersecter, that one of the parts, and the mass of ground in which it is imbedded, have been shifted out of their former position horizontally, but without change in the relative levels of the parts so separated. If this were the case at East Wheel Russell, the lode would also have been heaved south, instead of north, in the same degree as the elvan, and its length in the sett would have been shortened from 500 to 250 fms., and the distance between their backs at the surface, at the eastern boundary, would have been only 200 instead of 200 fms. I consider that the phenomena actually exhibited can be only explained upon the principle that the masses of ground and parts of the lode and elvan on the east or hanging-wall sides of Nos. 2 and 3 cross-courses, have sunk perpendicularly to the depths of about 50 or 60 fathoms lower than the present level of the corresponding portions on the west side of No. 2 cross-course; in this way, as the lode and elvan underlie in opposite directions, and from their junction in depth rise upward in the form of a letter V, the wide part at the east sides of the cross-courses would be brought down opposite to narrower portions on the sides, consequently the south underlying lode would seem to be heaved to the left, and the north underlying elvan course to the right, and as the latter underlies 18 fms., and the former only 1 ft. per fm., their apparent heave would bear the like proportion, as is actually found to be the case. The elvan course, which is only a few fathoms thick in the western part of the sett, increases greatly in bulk as it proceeds eastward and in depth. Towards the outer surface it is composed chiefly of felspar in large crystals, but towards the centre it becomes much more granular and quartzose, contains a considerable quantity of schist, and in many parts resembles tin capel. In the tunnel, about 20 fms. from its northern wall, it presents a case which occurs in the lode, and I have no doubt it may occasionally be found impregnated with tin ore; hence it may not improperly be termed an "elvan lode," where the Holme and Beam lode is in contact with it near the surface, I think the former will be found to contain a considerable quantity of tin. West of No. 2 cross-course, the lode will pass through the elvan at an inconsiderable depth, and will then descend through kyllas of fine quality; but east of the same cross-course, owing to the subsidences before mentioned, the lode will not reach the elvan at a less depth than from 60 to 100 fms.; whether it will be most productive of tin or copper whilst passing through the elvan, can only be determined by actual trial, but if an inference may be drawn from another case which occurs in the lode, it is that the elvan 400 fms. further north, where the Georgina lode becomes rich in copper ore, is of fine quality, as soon as it enters another elvan course of similar character, we may presume that the Holme and Beam lode will in like manner produce copper ore, where it traverses the elvan in depth.

The former and present workings have been confined to the part of the lode west of No. 2 cross-course, large open workings have been made upon its back, an adit has been driven about 80 fms. beneath them, and the end is 15 fathoms under the old bottom. Hitchen's perpendicular shaft has been commenced by the present company, about 50 fms. west of No. 2 cross-course, and is pitched immediately north of the elvan course, which there forms the hanging wall of the lode. At the time of my inspection (25th February) it had been sunk on the lode 15 fms., of which 3 fms. are under the adit, and had not quite reached its centre, and will require about 25 fms. further sinking before it touches the foot-wall. Such a lode is rarely to be seen—it is from 35 to 40 ft. wide, composed of soft friable quartz or sugar spar, gossan, peach, pruned, decomposed felspar, and occasionally contains fragments of soft white elvan, which have dropped from the hanging wall during its formation; one of these may be seen in a cross-cut driven north from the shaft at 7 fms., where it is 7 or 8 ft. wide, but in the bottom of the shaft it has diminished to about 2 ft., and in a few fathoms more will probably disappear altogether. On the south side, in the bottom of the shaft, I found the lode intersected with tin ore, which is chiefly contained in the decomposed felspar and capel, but the north side of the lode, as seen in the cross-cut before referred to, appears more likely to produce copper than tin in depth. About 70 fms. east of Hitchen's shaft, and on the east side of No. 2 cross-course, Murchison's shaft has been sunk 6 fms. through kyllas, down to the hanging-wall of the lode, which there presents the same characteristics as to size and composition as that at Hitchen's shaft; the only other place further east, where it has been seen, except in the ancient surface workings, is in the canal tunnel, about 50 fms. south of Bray shaft, where it is still apparently a very large and soft lode, but is hidden from view by the masonry required to support the roof of the tunnel, where it passes through it; a level has been driven from the tunnel a few fathoms west, upon the hanging wall, but is in too ruinous a state to allow of its being explored. About 15 fms. north of Bray shaft is a south underlying copper lode, and 30 fms. beyond it is another copper lode, underlying slightly north; these two lodes will intersect each other at about 40 fms. above the tunnel, and might easily be examined from Bray shaft—they both appear to contain good copper ore. With the exception of the southern portion, where a hard coarse slate prevails, the kyllas beds, occupying the remainder of the sett, are of the most favourable character.

In conclusion, I have the pleasure of stating that I have never seen a new mine of more splendid promise than East Wheel Russell, and exclusive of the magnificent lode, now in course of development, there are others of sufficient importance to constitute it a very valuable property. The surrounding circumstances are all such as should be desired; and I can only recommend to the adventurers to push boldly on in the course they have begun, so as to give the lode a fair trial, and I have no doubt they will be richly rewarded for their perseverance.

MINING SPECULATION IN SPAIN.—A correspondent of the *Aurora Minera* of the 11th inst., writing from Cordova, complains of the scandalous conduct of many persons there, who "denounce" mines without any intention of conducting a farthing in working, but merely for the purpose of selling them as opportunities for sale; and so they hold them for two or more years, preventing others who would work them *bona fide* from doing so, except by submitting to the terms of the mine sellers. So it appears "bal" selling is not confined to England, but is also amongst the sierras of Spain. Of the two, however, our own bal-sellers seem to be the worst, because they often, by false reports, induce the unwary to purchase that which they know to be worthless, to the manifest injury of mining as a legitimate branch of industry.

ALFRED CONSOLS.—There is no change to note in Field's engine-shaft sinking under the 80 fm. level, since the last report. The lode in the 80 fm. level, east of said shaft, is 4 ft. wide, and changing very much in appearance for the better; it is composed of capel, muddle, and small quantity of copper ore. We expect, ere long, to have the pleasure of informing you of a good course of ore in this level. The lode in the 70 fm. level, east of the engine-shaft, is 6 ft. wide, 5 ft. of which is good saving work for copper ore, worth from 80 to 90¢ per fm. There is no change to notice in any other of our tunnel operations. We are also glad to inform you that we find the water decreasing pretty much—so much so, that we are enabled to work regularly throughout.

BEDFORD UNITED.—The lode in the 115 fm. level, east of the engine-shaft and Andrew's winze, is without alteration; we are driving by the side of the lode in this level west. In the 103 fm. level east the lode is from 3 to 4 ft. wide, and will yield 6 tons of ore per fm. In Parker's winze, in this level, the lode is 3 ft. wide, producing a little saving work. The lode in the 90 fm. level east is 2½ ft. wide, and worth about 1 ton of ore per fm. In Arcsott's winze, in this level, the lode is 3 ft. wide, and will produce from 5 to 7 tons of ore per fm. In the 47 fm. level north we have cut the lode, which has been seen since the last report; the lode where cut, is 18 in. wide, composed of spar and muddle, with zones of black ore. We intend driving a few fathoms on the course of this lode.

BLACK CRAIG.—We have some little improvement in the appearance of the lode in the 2½ fm. level, since the last report. The lode in the 2½ fm. level, east of the engine-shaft, is 4 ft. wide, and changing very much in appearance for the better; it is composed of capel, muddle, and small quantity of copper ore. We expect, ere long, to have the pleasure of informing you of a good course of ore in this level. The lode in the 70 fm. level, east of the engine-shaft, is 6 ft. wide, 5 ft. of which is good saving work for copper ore, worth from 80 to 90¢ per fm. There is no change to notice in any other of our tunnel operations. We are also glad to inform you that we find the water decreasing pretty much—so much so, that we are enabled to work regularly throughout.

BODMIN MOOR CONSOLS.—The new engine-shaft is now down 8 fms. from surface in a beautiful stratum of ground, composed of mica and decayed granite, with numerous small branches of blue peach, which, at a greater depth, and when they fall together, I have no doubt will make tin in abundance. The engine works well, and keeps the water with ease. The present price of sinking is 6½ 10s. per fathom, the adit having been driven for the last 5 fms. through large boulders of hard granite, but I am confident, from present appearances, we shall shortly get out of this hard ground into an congenial one as the shaft, which is about 12 fms. further to hill. There is very little water coming from the shaft; the stamps will forthwith resume working. I have no doubt we shall have sufficient stuff to keep them going; from the present appearances, the congenial state of the strata, and the largeness of the lode, there can be no rational little doubt but you will have here a most valuable tin mine, and that shortly.

BODMIN WHEEL MARY CONSOLS.—The lode in the new winze, on No. 1, is increasing in size, and producing stones of ore. Sparge's end, driving west from the second winze, on No. 1 lode, is 4 fms. below the adit, and is now producing 3 tons of ore per fm., which will dress to be worth 9¢ per ton. This course of ore has increased in size and value daily since it was cut last week, and is equally as good going down and in the back. The end of No. 3 lode, in the 10 fathom level, contains good branches and stones of ore; the three parts of tributaries running on the back of this lode are earning good wages and working with spirit. We have drawn up 40 kibbles of fine ore this morning, and have had about 12 tons brought to grass since we sampled last week. We shall increase our number of dressing hands next Monday. The ground in the shaft still continues very good—indeed, we shall be down to the 20 fathom level, and complete the plat by the end of next week.

BORINGDON PARK.—We have hauled a good pile of work from the end to-day (19th inst.), and the lode still continues to hold out good; it carries a good deal of fluorine, and not so much muddle as it did some time back; it is good saving work all the size of the end, and how much larger I cannot say; the ground is very fair. I am thinking of driving a few fathoms further, and, when done, cross-cut the lode, to see what size it is.

MARCH 20.—The end is in about 43 fms. from Hitchen's shaft, and the lode, since last reported on, has very much improved, being good saving work all the size of the end, which is from 4 to 5 ft. big. In consequence of the air in the level being very dead, we have been obliged to fix our machine and air-pipes. The men are busily engaged in bringing home the last for dressing.

BRYN-ARIAN.—The 20 fm. level is extended west from the engine-shaft about 15 fms.; the lode for the greatest part of the distance has averaged from 6 to 7 ft. in width, composed principally of spar, mixed with kyllas, copper, and lead ore—at present will yield from 10 to 12 cwt. of ore per fm. In driving this end about 5 fms. further, it will get under a winze which is now sinking down from the level above; this winze will also ventilate the 30 fm. level, and lay open a good piece of ground for stopping. The 10 fm. level west has been, for the last two months, in rather unsettled ground, and the lode disordered; but it has now become more compact, and for the last three days has been yielding some good stuff. The winze is down 15 ft. under the 10 fm. level; the lode in this place is 10 ft. wide, the 6 ft. of which they are carrying will yield 10 cwt. of ore per fm. The stopes in the back and bottom of the deep adit level west are rather improved, and will now yield 15 cwt. of ore per fm. The lode in Hallett's shaft is still very large, but at present not so productive as last reported, now yielding from 25 to 30 cwt. of ore per fm., having a great many small branches of black slag intersecting the lode for the last 4 ft. in sinking; but these are not considered unkindly symptoms for lead lodes in this country. We are in regular course of dressing, and shall have 20 tons of ore ready for sale by the end of the month. I have thought of a plat to cut at the adit level, west of the engine-shaft, where we intend fixing a winze for drawing the stuff from the levels below; this I consider will prove a saving, in bringing the stuff to the surface, of at least one-half. Should our prospects continue as at the present time, I expect in the course of a little time to be enabled to meet the cost by the quantity of ore that will be raised from the different parts of the mine, as I hope in three months from this time we shall be down to the 20 fm. level in Hallett's shaft, and levels extending on the course of the lode east and west; and, judging from the appearance of this lode, so far as I have seen it, no doubt but that large quantities of ore will be thrown up.

BRYNTAIL.—Saturday last was our monthly setting, when we set as follows:—The 15 fm. level above adit, to be driven eastward, by six men; this end will produce about 2 tons per fm. The stopes in the back of the 5 fm. level above adit, producing about 3 tons per fm.; and a new stop in the back of the 10 fm. level, east of the ladder winze, by six men, worth at present about 10¢ per fm. Hill's stop is suspended for one month, until we can clear some old workings to the north of it. We have also put four men to drive north about 20 fms. west of Hill's rise, in order to open a communication between the said rise and the 10 fm. level. The shallow adit we have resumed driving, to ventilate the upper part of the mine; and a second shallow adit, which we are driving, and intend shortly to communicate with the 15 fm. level, by means of a winze, thus not only ventilating, but, in all probability, laying open many fathoms of good grey ground. This week we intend commencing a shaft from the surface, and as we wish to sink as far as possible below the adit, this summer we purpose rising against it from the deep adit level. Our new crusher is on the mine, and will be in course of working in a few days.

CARN GALVER.—Since our last meeting, we have kept four men in the deep adit, which is driven 37 fms. from the sea southward, and our intention is to put on this level with all speed, to cross cut the east and west lodes running through the sett, several of which have produced abundance of tin. We have collared the moor shaft, and put in ladders to the adit, put a horse-whim on Roscorla's shaft, and cleared and secured the same to the adit; we have also cleared and secured the adit level of fathoms west from Roscorla's shaft, and have put four men to drive the end on the Ranger lode ground 4½ ft. in; in driving on this lode we expect shortly to come across the heathcock lode, of which we have had good reports. We are preparing to get the water out of the 10 fm. level under the adit, where we are informed by the last men who worked there that we can break tin at once; by driving a short distance from this level, we shall cut Tiegwarra, another very productive tin lode. Several men are waiting to take pitches where they worked when the mine was working under the name of Morvah and Zenor. From the Heathcock we intend driving to cut the Osborne lode, famous for tin in former times; at this point we shall have an adit 30 fms. from grass on the Ranger lode, and our deep adit level will come in 50 fms. below this.

CARTHEW CONSOLS.—We have yet good ground in the 85 fm. level end north, and are opening the lode very favourably indeed, 1½ ft. at this point well-defined, and producing good stones of ore. The lode in the north end, 75 fm. level, continues rich in lead and copper, and is now working to the north of it. The lode in the south end, this level, shows very well, and producing good work in lead. A very great improvement is visible in the south end, 65 fm. level, all of which is good work. The lode in the north winze, 65 fm. level, is very good indeed for copper, as is the lode in the south winze at this level for lead and copper. We are engaged in cutting plat in the 65 fm. level, middle shaft, and so soon as this is completed we intend to commence to sink this shaft to the 75 fm. level with all little delay as possible. The tribute pitches appear very fine.

DAREN.—Most of the operations in this mine last year have been confined to cross-cutting, the lodes opening the sides in places where it had not been thoroughly taken down, clearing the old levels westward towards the old mine, making new surface roads, erecting new dressing machinery, and in laying open a good course of copper ore discovered in the eastern part of the mines, which has had a 10 fm. level driven into it from the side of the hill, and which has laid open a course of good copper and lead ore now, for a length of 20 fms. We have also opened a new adit against 25 fms. below, which is driving forward with fine looking lode in the forebush with good stones of copper in it. These new adits, together, will lay open a section of upwards of 30 fms. high, by 20 fms. long, or 600 fms. of profitable ore ground. Our principal object, however, is to get our levels westward into the old Daren ore ground; this ore ground produces an ore of a very high quality for silver, holds in a continued line of productive ground for upwards of 200 fathoms on the western side of the Daren hill, and in the history of the old mines of this county, we find that the yield of this ground was in quality equal to any mine in Cardiganshire—in fact, the old account says that the bottoms, east of George's shaft yielded, although worked by hand pumps, 100 tons of silver-lead ore per month. I have no doubt, nor can there be any account for doubting, that when we have undermined this ground that our returns will be equal to theirs. Our system of working this part of the old mine, is to carry level Coed adit westward, and make it as good as an adit level through the whole mine. This adit in the deepest part of the old workings will be about 30 fms. above the bottom of the mine. We expect much advantage in another point of view from this level—viz., it is known that a very large quantity of good tribute ground exists in the sides of the old workings, west of the engine-shaft; these workings were not less than 30 fms. from the surface, and when previously worked, subject to the cost of raising the water and the ore stuff. By completing level Coed we shall get a railway under these bargains, and, of course, they will be free of water-charge. I am, therefore, of an opinion that much ore will be taken away under profitable working from the back of level Coed adit. In order to work the ground under profitable in the bottom, or deepest part of the mine, we propose to put a small high-pressure steam-engine, 15-hp. cylinder, to pump out the water and to draw the ore to the height of level Coed; and I apprehend not the slightest difficulty in this application. Eventually the engine will be relieved of its pumping work by a pressure-engine, and I have no doubt that in time the Rheide will be brought on to Daren, which will become available for working the mine to depths unapproachable by any water machinery at present at work; but for all present purposes we can see our way perfectly clear by such power as I have alluded to, and which in the course of the summer we shall have at our command. Specimens of the Daren copper and silver-lead are sent to the Crystal Palace.

DEVON AND COURTENAY CONSOLS.—On the return of our two-monthly meeting, it becomes my province to present you with the accustomed report of the mine's operations, and I assure you I perform this duty under circumstances peculiarly pleasing. I have to acquaint you that our prospects in the central part of the mine are at this moment of the most encouraging character. During the past two months we have been extending the 60 fm. level west of the engine-shaft, where we have driven 7 fms. 3 ft. 9 in., at an average cost per fathom of 87. 7s. 9½d., and during the progress of which we have never been entirely without ore, and occasionally with quantities, more or less flattering, until within the last 8 or 9 ft. driving, where the lode has gradually assumed an appearance indicative of a profitable result, and at the present moment is yielding about 2½ tons of copper ore to a fathom, worth at least 6½ pence per ton.

In the east end we have driven 5 fms. 4 ft. 11 in., at an average cost of 62. 1s. 4d. per fathom; the lode is poor, but I am inclined to think we shall get a change when we approach the eastern cross-course, as we had ore about the cross-course in the level above. We have driven the 30 fm. level 6 fms. 3 ft., at an average cost of 41. 10s. per fm.; the lode at present is poor, but still not entirely without ore—the end is about 15 fms. behind the 40 rise. The rise at this time is 7 fms. 2 ft. above the 40 rise. During the last two months we have raised 6 fms. 0 ft. 6 in., at an average cost of 42. 12s. 8½d. per fm., about 4 fms. of which were in a good branch of ore; at this time it is not quite so good, but nevertheless it produces 1 ton of ore to a fathom, and I doubt not but that we shall find the lode more productive in exploring the ground west of the rise, in the event of the 30 fm. level being driven through it. The 30 and is now about 11 fms. behind the shaft—it will take about two months to extend that level to the rise. We have sunk Cartlew's shaft 2 fms. 2 ft., at 65s. per fathom, and Rundle's shaft 1 fm. 4 ft., at 40s. per fathom. We have about 15 tons of ore broken, worth about 185¢.

DRIFT MOOR CONSOLS.—These mines are in the parishes of Madron, Sancreed, and Paul, and have recently worked in part by the name of Wheal Conquer. The tin which has been found here is of the richest quality, and from the fact that several lodes run through these grounds, it is expected that it will be a profitable concern. An excellent tin lode has been discovered within the last few days at the surface. We are driving on the Wheal Conquer lode east and west in the 12 fm. level, where we have a good tin, and shortly expect to meet with an intersection of lodes, which seldom fails to produce mineral. We have a fine stream of water running through the ground, which works an 18-foot wheel, by which we draw the water, and work a six-head stamp. From the improvement here in Wheal Conquer lode, and from our having another productive tin lode, where we can raise tin at once, we expect to find a profitable mine.

DYFENGWYM.—We have set the 20 fm. level to cross-cut the lode at the Castle—price 6½ pence per fathom; the takers have to draw the stuff, lead ores, &c., to the 9 fm. level. The lower engine-shaft is down nearly 8 fms. below the 32 fm. level; if the ground continues as it is at present, we shall get down to the 42 fm. level by the 10th of April. The 32 fm. level west is still unproductive; the lode is large and promising—within the last day or two the lode has been very sparry. I live in hopes of seeing a change for the better by the end of this month. The winze-shaft below the 32 fm. level is productive; the lode is large, and contains a great quantity of carbonate of lime—in fact, it has quite a different appearance to what it had in the 32 fm. level. The roof stone in this level, is now producing some good lead ores, and we expect to see it improve as we advance further west. Stop No. 4, in the bottom of the 22 fm. level, west of shaft, has improved a little since last reported on. The stop in the bottom of the 20 fm. level, east of shaft, has fallen of considerably since setting day; however, I intend suspending stopping in this part, and put the men to stop east of the winze, where the lode is larger and richer. In the dressing department we have taken abroad the crushing mill, and I shall commence heaving in the new work as early as possible.

EAST BALLESWIDEN.—I am glad to report to this meeting that our engine-wheel is now at work, and doing the same in grand style. Numbers of mining agents and miners have come to notice the working of this wheel, and they all say they never saw one better in Cornwall or Devon. I am fully convinced we have a first-rate mine. I expect by the 19th May you will have good reports, as now we have a good tin, and from all reports, a good deal of tin in the engine-shaft. Everything we can notice in the adit, and on our lodes, convince us that the adventurers may expect great and lasting profits from this mine. The shaft is drained but 8 ft. at present; we have, therefore, nothing further to report until we have forked the water.

EAST CROWDALE.—Our 50 fm. level is still in the elvan course, ground very hard for driving; we are expecting every day to cut through it, with a sanguine hope of finding the lode as good as in the bottom of the 40 going down; both the stopes in the back of the 40 are rich, wide for 14 fathoms in length, producing saving work for tin, but on the whole not rich. We are obliged to send the whole of the lode to surface, to effect the necessary separation for the stamps. The stopes in the bottom of the 28, west of Renfy's winze, lode 2 ft. wide, not as yet taken down—waiting to take away the deads first from the dense. Nothing to notice this week in our tribute department.

EAST WHEEL GEORGE.—We have cut through the lode in the 28 fm. level; it is from 5 to 6 ft. wide, composed principally of spar, spangled with yellow ore. We shall now commence driving both east and west on its course; the men will complete the plat in the 23 fm. level by the end of the present week. The lode in the 12 fm. level, east of the shaft, is without any material alteration, being large, and producing good stones of ore. The stopes in the back of the 12 fathom level, west of the shaft, are yielding fair work.

EAST WHEEL REETH.—In my last I informed you the lode was much smaller in the 10 fm. level end, and that it was my opinion it would make itself again. Yesterday the men discovered it was again making good appearance, and the lode was richer work since it was discovered than at present. I brought up some splendid stones of tin, one of which was judged to be worth 60s. per barrow. I have no doubt before my next report the lode will be as large as at first. If we could keep on the bottom end, there is no doubt that before we drive 5 fms. further there will be a good lode there also. On Monday we cut Wheel Reeth south lode in our sett; we cut it in the first pit, and a pretty lode it is, going down from 12 to 15 in. wide, and shows a good edge of tin.

ESGAIR LLEE.—The lode in the deep adit, east of Morgan's winze, is improved since my last, and has a promising appearance, and will on an average yield upwards of 1 ton of ore per fm. The lode in the 12 fm. level, east of Morgan's winze, is 3 ft. wide, but poor at present. The stopes on an average are much the same in appearance as at my last, and yielding from 10 to 15 cwt. of ore per fm. We shall be ready this week to sample 20 tons of lead ore.

EXMOOR WHEEL ELIZA.—The engine-shaft is sunk to the 36 fathom level, and the crown lift will be fixed to-day (March 17th). In sinking the last 4 or 5 ft. the branches in the shaft have much improved; one of these, 10 in. wide, produces fine specimens of black and grey oxides, yellow sulphuret, and large stones of native copper, and is of additional importance, as these branches run into the middle lode, which is near the shaft, and will be intersected in the 36 fm. level in about two weeks. The cross-cut to the north lode, about 6 fms., will go through various branches, varying from 9 in. to 4 ft. wide, and will be accomplished in about six weeks. The chances before noticed are greatly in favour of a discovery, as in the 24 fm. level cross-cut the appearance exceed those in the 12 fm. level, and it is expected, with great reason, that the 36 cross-cut will also exceed that of the 24 fm. level; if so, we have every prospect of ultimately realising our wishes.

GARRIG.—The adit level has been cleared, and the end commenced driving, at 3½ pence per fm. The north and south lode, where intersected by the adit level, and for the whole of the distance driven north and south, is of more than ordinary size, varying from 9 to 15 ft., presenting most favourable and congenial appearance, and composed principally of black and grey oxides, yellow sulphuret, and large stones of native copper, and is of additional importance, as these branches run into the middle lode, which is near the shaft, and will be intersected in the 36 fm. level in about two weeks. The cross-cut to the north lode, about 6 fms., will go through various branches, varying from 9 in. to 4 ft. wide, and will be accomplished in about six weeks. The chances before noticed are greatly in favour of a discovery, as in the 24 fm. level cross-cut the appearance exceed those in the 12 fm. level, and it is expected, with great reason, that the 36 cross-cut will also exceed that of the 24 fm. level; if so, we have every prospect of ultimately realising our wishes.

GREAT POLGOOTH.—March 15.—The principal runs of tin having a rapid inclination eastward, much dead ground has necessarily had to be passed through in the deeper drivings. The bottom levels are now, however, getting near where it may be calculated on finding the rich runs of tin ground had at and above the 76. The north lode, since last report, in the 84 east is much improved, and some rich stones have been broken, but it will require a few days more to cut into the lode sufficiently to give the parties; so far, however, as we can see, it promises to be an important discovery. The lode is believed to be found to be the best of the mine, and yet half worked. The men are now on tribute, at an average of 7s. 1d. in 14. The mine is yet only a shallow one (Wheal Vor was worked at a great profit to 340 fms.), our deepest point being only 110 fms.; whilst the levels below the 76 are not yet in the tin ground, excepting the 84, which, as stated above, has just reached it. It is believed, one of the eastern runs, and consequently, the entire lode below are unwrought, and many thousands of fathoms above the 76 now remain that will work on tribute, and occupy years to work out; besides, there are side lodes of great promise, which are whole from surface. This property has yielded a quantity of tin to the same depth than any other mine in the county, and the lode is in fact, a new mine, and number of lodes, not yet half worked. The tin sold in the last two years alone has realised 55,000¢ (even at the very low prices which have ruled), affording a very handsome profit, part of which was applied as capital, and part (between 5000¢ and 6000¢) was paid as dividend. The new company, who it is expected will take possession and commence their plans about the 31st inst., having means to ensure full efficiency and economy, purpose to explore with vigour on the various lodes, and to get the 110 from Taylor's shaft cut out for tribute. If they do this for the next five or six months, it is very probable that the present large returns will greatly increase.

MARCH 18.—The lode in the 84 fm. east is rich at this time, and looking well, but being hard, there is not at present much of it broken; a more decisive report on this good promise of the lode may be expected in a few days. In the 75 there is also a good branch of copper. We have between 6 and 7 tons of the ore ready for sale.

GREAT WHEAL ALFRED.—Our principal operations since the 14th Jan. have been to get the 90 engine-house built with the strongest material, and with little delay as circumstances would admit of; the wet weather of Jan. and part of Feb. has been an impediment, but since the house is raised from the surface we expect rapid progress. Having built the loading for the cylinder, the building will proceed more rapidly, especially as every day brings weather suitable for the masons proceeding with their work. The boilers are contracted for with Messrs. Williams and the Perran Company, and other necessary work proceeding with as rapidly as possible. We have cleared the adit and shaft south towards the great elvan lode, and shall proceed cross-cutting towards it in a few days; the intersecting this south lode is an important feature, as it has a strong appearance in the back at the shaft sunk below the surface. The lode has been wrought in this sett only a few fathoms deep from the surface.

HENNOCK.—The engine-shaft is progressing very satisfactorily, and producing some good branches of lead. We put down our 10-in. lift, and took up the 8 in., and now we keep the water by working the engine four strokes per minute, when before we were obliged to drive her from seven to eight. The lode in the 20 fm. level north is looking exceedingly kindly; in fact, we have never seen it looking so well as at present; its composition is a beautiful decomposed quartz and barytes, with some good work for lead, and the hard part appears to be getting much smaller. Our prospects appear to brighten every week as we sink, and also in driving north.

HOLMBUSH.—We are making rapid progress towards the completion of Hitchen's engine-shaft to the 132 fathom level by sinking and rising, and hope we shall knock a large hole through it this week—every effort is being made to accomplish it. We are also pushing on the 132 fm. level south to cut the counter part of the copper lode, and afterwards to extend the level westward to intersect the lead lodes; the lode in the stopes in the back of the level will produce 5 tons of copper ore per fm. The lode in the 132 fm. level, west from the cross-cut, opposite the diagonal shaft, is 10 in. wide, producing 1 ton of ore per fm. of rich quality, and no doubt will improve as we near the great cross-course. The flap-jack lode, in the 130 fathom level, east of the great cross-course, is 16 in. wide, composed of spar, muddle, kyllas, peach, and stones of ore. The same lode in the 110 fm. level, east of the cross-course, is 12 in. wide, composed of spar, peach, muddle, and stones of ore. The lode in the

KIRKCUDBRIGHTSHIRE.—The lode in the 74 fathom level end, west of Stewart's shaft, is 3 ft. wide, yielding 7 cwt. of lead to the fathom. The lode in the 62 end, west of Gillin's shaft, is 4 ft. wide, producing good stones of ore. The rise in the back of the 50 end is held to the level above. The lode in the 40 end west is 4 ft. wide, yielding 12 cwt. of lead to the fathom. The lode in the 30 end, west of Keith's, is 18 in. wide, and much improved.

LAMHEROEE.—The 60 cross-cut north is progressing more favourably; I calculate upon driving nearly 5 fms. this month. We have communicated from the 60 to the 50 fm. level, and have put the same six men to rise in the back of the 50 fm. level; the ore will not be taken down in this rise before the latter part of next week. In the 50 fm. level, east from engine-shaft, no lode has been taken down since last setting day. Jesse's shaft was 5 fms. deep below the adit last setting day, and I expect the men will sink 4 fms. this month. I advise running down this shaft to the 30 before we drive on the course of the lode. We have sunk the new shaft, on the champion lode, about 4 fms. on its course, and raised 50 tons of tin work, which will yield 5 tons of black tin; the lode is now 5 ft. wide. We have commenced sinking the wheel-pit and removing the earth for the dressing floors; we are going on as briskly as possible, but the weather being wet is very much against us.

LLWYNMALEES.—The 24 fm. levels east and west have much improved; we have good branches of ore in each of them. The 14 fm. level west is also improving daily; the slopes over this level, west of the western winze, are looking better than they did; the 14 fm. level west is in a very strong lode, but contains little ore at present.

MERLYN.—There is no alteration to report since my last; the plat and pent-house in the winz-shaft is completed, and we commence sinking without delay; the pitches and ends are much as last reported. A small discovery has been made in the adjoining land, close on the boundary, but a few yards from surface, not in the vein, but in a flat, which runs between the loose ground (gravel) and the rock, and some 4 or 5 fathoms from the vein, and I think, will extend itself into the Merlyn sett; this and similar bunches, which are not unusual in this neighbourhood, I hope will greatly assist our returns.

NEW COPPER BOTTOM CONSOLS.—Our east and west lode having been so very large, and particularly so where we passed the cross-course, or as we thought it to be, quite devoid of us, especially as we could not find a wall on either side; but now I am happy to say, we are most agreeably disappointed, for what we thought to be the cross-course has proved to be a beautiful canter lode, 8 ft. wide, running 20° west of north and east of south, composed of sugar spar, capel, peach, and grey ore; I never saw a more splendid lode. Our east and west lode is rather disordered by a cross branch, yet not without ore, for the ore part of the lode is 3 ft. wide, and will now produce very good specimens of grey and black ore, and in another week I believe it will be quite as good, or better, than it has been. It appears that we are just going over the back of the ore; I believe, if we were only to sink 10 or 20 fms. below the adit level, that we should soon be in a position to make large returns, and have good dividends.

NORTH TAMAR CONSOLS.—The men in this mine during the last month have been employed clearing and repairing the adit, and have succeeded in getting in about 30 fathoms, but for the last fortnight have been driving around a run or choke in the adit, and by so doing have driven through the part of the lode standing by the side of the level driven, and find it 9 ft. wide, spotted with lead, and as fine a looking lode as can be seen. I expect in about a week from this time to hole into the old level and let down the water, when we shall be able, I hope, to go into the end and break some lead, where I am told there is a leader about 4 in. wide in the bottom.

NORTH WHEAL BULLER (OR GREAT SOUTH TOLGUS).—Our prospects since my last are much improved, although the bottom level, east and west, may be reported as before. The shaft sinking under this level has a promising appearance, and we have an improvement in the lode rising from the 50 fm. level, towards the winze sinking under the level above. The 40 fm. level, which for a long time has been promising, has now become productive; the lode is 18 in. wide, and will produce 2 tons per fm. in length, besides having a back and bottom of good ore ground, seen in the 30 fm. level; but it is of a much finer texture, and a stronger lode, than seen in that level, and we are confirmed in our opinion that in deeper levels there is much more ore. We have now about 40 fms. to drive to Noel's shaft, all of which in the level above proved ore ground.

PENTIRE GLAZE AND PENTIRE UNITED.—We have holed boundary shaft in the 22 fm. level, and the men who were driving the cross-cut are now employed cutting a plat in a large and promising lode, producing good stones of lead ore; there is more lode to the west of us, and when we have finished the plat we shall cross-cut it to prove its value. Boundary shaftmen are employed in cutting ground in the 10 fm. level, for a plat, &c., and when this is done they will case and divide down the shaft to the 22, in order that we may be enabled to draw stuff from that level. The lode in the 10 fm. level, driving south on the intermediate lode, is as good as last reported. During the last week we have had a large, loose, hollow lode, composed of gossan, copper ore, and great quantities of the carbonate of lead, with a leader of good lead ore, 10 in. wide, on the western wall. We have now got through this hollow lode, and it has again resumed its hard and usual appearance. We have broken about 2½ tons of lead from this level since our last report. The 23 fm. level above the adit is still poor. At South Hill we got through one of the runs in the 20 fm. level, but there are several fms. more to clear before we get to the end of ground. We are in hopes that the remainder of this level will not be so troublesome, but we think it advisable to clear the bottom level before we do anything more in this. All things are going on well in the mine.

PENZANCE CONSOLS.—We are still driving our 24 fm. level end west of Carthew's shaft, and we have a good lode of tin in it; it is much improved since last report; the branches are falling in with the lode, and it appears, at a greater depth, that the lode will much improve. In our 24 fm. level east we have good stones of tin; the lode is looking better than when last taken down. Our 18 fm. level end east is looking very kindly, with good stones of tin. In our 18 fm. level end, west of Carthew's, we have not taken down the lode since last report. We are still driving our cross-cut south-west of Carthew's shaft; the ground is hard in the cross-cut. We have not cut anything worth notice since last week. Our tributers are still going on very well.

PETER TAVY AND MARY TAVY CONSOLS.—Since my last we have laid open the lode in Cole's field, seen in the poor man's adit; we have now three lodes open, and, in all probability, there is a cross-course not far from us. Permission has been given to eastern in the lands of Wheal Friendship sett, when something further will be discovered, which will enable us to fix upon the spot for sinking the new shaft. The summen are sinking as fast as the ground will admit in the diagonal shaft; the lode is the same as when I last wrote, being well-defined on each side, but not quite so wide; this must be expected, as there is another hard bar of ground. I think when we get to the bottom of the winze we shall encounter softer ground, and the lode will improve accordingly. The whole of the machinery is working exceedingly well.

PRAED CONSOLS.—In the last fortnight we have driven 8 ft.; the first fathom at 4 ft., and 2 ft. at 30s. per fathom. Just before the first fathom was completed the ground became much better, and by its appearance seemed to indicate that something was near; in driving a little further we cut a cross-course, underlying east towards the cross lode, and will, consequently, intersect the large lode at about 4 or 6 fms. in depth. If the ground continues as it is, we shall get down where they intersect in four or five weeks. This cross-course will, doubtless, affect the large lode in some way or other. They are considered to be very favourable; and I should not be surprised if we have a good bunch of tin near the intersections. In my opinion the north adit ought to be cleared at once, as it appears our main efforts should be directed to that spot. This adit, it is said, commands three lodes; and it is reported that several branches of tin are gone down under the adit. In the opinion of practical men, this part of the sett is the best piece of mining ground in this locality; and it is my firm conviction that, if the company will expend a moderate amount of capital to erect proper machinery, it will ultimately prove a very profitable mine.

POLBERRO.—One or two of the pitches on the tin ground have improved during the last week; and at Destatet's, the lode in the 16 fm. level west, on Cley's, is larger, with some good work in it. Some of the bargains in Old Polberro have been stopped; the others are promising, but without any change of importance.

SOUTH TOLGUS.—The 54 west is yielding good stones of ore. The north lode in the 42 west is much improved, yielding good stones of ore; the south lode, same level, 3 tons per fm. The rise in the back of the 32 east is yielding 2 tons per fathom. The north lode, in the 12 west, is yielding 4 tons per fm. The south lode, in the adit east, is 1½ ft. wide, worth 1 ton per fm. The other levels are poor.

SOUTH WHEAL TRELAWNY.—We continue driving south of shaft on the branch last mentioned, in the 60 fm. level, with six men; the ground is more favourable than it has been some time, and the lode is more regular; the lode is from 12 to 18 in. wide, and also a cross-course underly east 1 ft. in a fathom; it is composed of floukan, barytes, killas, and muncie. The above level is extended in 21 fms.

TRELAWNY.—Trelawny shaft is sunk 6½ fms. below the 92 fm. level, the ground favourable. In the 92 and north lode is 3 ft. wide, worth 8½ per fm.; the south end, at the same level, the lode is 2 ft. wide, worth 7½ per fm. In the 82 north lode is 4 ft. wide, worth 12½ per fm. At the north mine, in the 68 end, north of Trehan, the lode is 2 ft. wide, worth 8½ per fm. Smith's shaft is sunk 6 fms. 2 ft. below the 55 fm. level, the ground favourable. The rise is held in the back of the 55 fm. level, and the men have resumed the driving of this end north, in which the lode is 10 in. wide, with some stones of lead. The slopes are without alteration.

TRELEIGH CONSOLS.—Christie Lode: In the 100 fathom level, west of Garden's, the lode is 18 in. wide, with good stones of ore, and is looking more kindly. In the 90, west of ditto, the lode is 2½ ft. wide, worth 25½ per fm. In the winze below the 50 fm. level the lode is 18 in. wide, with good stones of ore. Parent Lode: At Parent engine-shaft, below the 52 fm. level, we are sinking in the country. In the 30 fm. level, east of ditto, we are driving in disordered ground. At Burgess' shaft, from surface, we are sinking in the country for the middle lode.

TRELOWETH.—I am sorry to remark that the ground in the 32 cross-cut, driving south, towards Panpon's lode, has been harder than was anticipated; at present the killas is easier to be driven; expect 3 fms. more before we intersect that lode. At present the killas is easier to be driven; set the adit yesterday (14th inst.), at 3½ per fathom, to six men. The ground in the engine-shaft continues very good for sinking; down 6 fms. below the 32, having sunk 3 fms. 4 ft. in the past three weeks.

UNITED MINES (TAVISTOCK).—The engine-shaft is secured to the 50 fm. level, and after the next 6 fms. are completed, which will take about three weeks, the shaft is good to the 80 fm. level. We have commenced clearing up the shaft to the west of the turnpike road, and hope to begin driving this level in a fortnight; upwards of 3000 ft. of tin has been raised from this adit in the adjoining site. The 40 fm. level will be resumed in about three weeks, and there are one or two tribute pitches to be let there. The Rix-hill lode continues to improve in the 50 fm. level under the 40, which has produced so much tin as it approaches our boundary.

WELLINGTON.—The lode in the 50 fm. level, east of the engine-shaft, is from 1 to 2 ft. wide, principally spar; this level is within 12 fms. of the ore ground of the 40 fm. level. The ground in the 50 fm. cross-cut, driving north in the 40 fm. level, west of the engine-shaft, still continues hard for driving; but this cannot continue long, as it is near the lode. The ground in the cross cut, in the adit level driving towards Fisher's lode, is good for driving, and is extended to within 12 fathoms of the lode. The shaft that was sinking on this lode, under the shallow adit, is drained dry, and we are now about to resume the sinking of it. In our driving north at the western adit we have not yet found the lode. I am glad to inform you that the water is decreasing fast.

WEST PAR CONSOLS.—At the Vounder, Floyd's shaft is cleared to the bottom, which is 22 fms. from surface; in this level several tin lodes are now laid open, by clearing the drifts of the ancient miners; they are from 12 to 18 inches wide, and generally saving work, with good leaders of tin, of good quality. I compute that the tiniferous from the above lodes will produce 4 cwt. of black tin to the 100 12-gallon sacks, and am of opinion that 20 men stopping the back of the 22 fm. level, in addition to the work doing the tin lodes in the 12 fm. level, will produce 4 tons of tin ore per month, which, at the present price, will bring 54½ per ton. The ground being so favourable for sinking and driving, much ground may be opened in a short time, and in three or four months the returns of tin ore may be doubled. If the lodes, in opening more ground, continue as ore as at present, we shall soon pay mine costs. In Sarah's shaft the ground is as usual.

WEST WHEAL JEWEL.—The 70 fathom level, west of Williams's cross-course, on Wheal Jewel lode, is worth 5½ per fm. Carkeek's winze, in the bottom of this level, on the same lode, is worth 8½ per fm.; the men that were sinking are put to drive west, at the 85 fm. level, to communicate to the winze. The 57 fm. level, west of Hodges's cross-course, on Tolkarn tin lode, is worth 5½ per fm.; the 57, or cross-course, on the same lode, is producing stones of tin. The rise in the back of the 57 fm. level, west of Hodges's cross-course, on the same lode, is worth 25½ per fm.; these men are now put to stop the back of the level, west from the rise, where we can raise a greater quantity of tinwork for the stamps. The slopes east of Tregoning's shaft, in the bottom of the 13 fm. level, on the same lode, are worth 20½ per fm. The slopes west of Tregoning's winze, in the bottom of the 13 fm. level, on the same lode, are worth 23½ per fm. These slopes are working on tribute.

WEST WHEAL VIRGIN.—Since the last meeting, we have completed the engine-shaft to the 19 fm. level, and I am glad to say the lode has been improving for last 10 fms. sinking. We have now extended the 19 fm. level 6 ft. east and 6 ft. west from shaft, and there is a good lode of tin in each end. As soon as we have fixed the plunger-lift, and extended the 19 fm. level about 3 fms. each way, we shall begin to sink the engine-shaft. You may notice that this shaft is in a fine run of good tin ground; the tin we stamped from 5 fms. sinking produced more than 40½. After a few months we expect to raise a good quantity of tin every month. I am glad to say that we have a good tin lode north of the one we are now working, about 5 fms., which we intend to cut soon, and we have also one a few fms. south which we mean to work on. On the whole, this mine never looked so well before.

WHEAL ADAMS.—The end driving south in the 72 fathom level is producing about 1 ton of lead per fm.; the lode principally consists of quartz, with lead disseminated throughout. We have no wall to the lode, but water issuing from each side of the level, which justifies our saying there is a portion still standing. In the 72 fm. level, driving north to cut the lead lode, the end is in ground beautifully whole, and is in every respect kindly for mineral. The winze sinking below the 60 is producing full 7 tons of lead per fm., and the lode is going down perpendicularly, which is an important feature; the rise in the back of the 60, in the black ground, is worth 5 cwt. of lead per fm. The 40, north of new engine-shaft, is in decomposed clay, with strings of lead running in the direction of the lode. The 30 fm. level driving north from old engine-shaft is in white killas ground, and is altogether just as we would have it to be. The same remarks will apply to the lode above the 40, where we are cross-cutting west, to intersect the lode, and judging from the indications, we have reason to believe it will be productive; the slopes in the back of the 40, south of the rise, are producing full 1 ton of lead per fathom. The slopes north of the rise are worth 10 cwt. of lead per fm. The slopes in the back of the 28 are producing about 1 ton of lead per fm. of good quality. The pitches are quite as good as they were on our last setting-day. At Allier, the adit level is approaching the lode, which end presents favourable indications for mineral. The end driving west on the maganese lode (which is 2 feet wide at hill), is producing very good work for maganese.

WHEAL AUGUSTA.—Since our last meeting in January, we have been extending the 18 fm. level west from engine-shaft, on engine lode; the lode has been from 2 to 4 ft. wide all in tin ground. We have extended the 18 fm. level east by very promising tin ground. We are sinking the engine-shaft under the 18 fm. level by six men, and are down 5 fms. When this shaft is down 13 fms., we intend to extend the 30 fm. level west under the rich course of tin which is now left in the bottom of the 18 fm. level, west of engine-shaft. We have also cleared the 10 fathom level, east from engine-shaft, and have discovered a fine lode of tin 8 in. wide. In extending our 18 fm. level a few fms. more east and west, we shall cut two more lodes, which are producing good tin-stuff in the backs. When this work is completed, we expect to raise a good lot of tin every month, and may say that the mine has a promising appearance. The lode in the 18 fm. level, very like the large rock of tin now in the company's office. This mine is looking first-rate. We are now working in the levels.

WHEAL CREBOR.—The lode in the 54 is continuing large and ore, from 5 to 6 ft. wide, composed of copper, peach, priant, and floukan, worth on an average about 12½ per fm. From present appearance we anticipate further improvement, and shortly—price for driving, 3½ per fm. The rise above the 54 is communicated to the 40. The men are now driving south to cut the lode west of the cross-course in that level (40), the ground is favourable for driving—price 3½ per fm. The lode in the 12 fm. end, at Cock's, is continuing large and promising, with a south underlie. The 30 and 20 cross-cuts are without alteration. The ends driving on the lodes are encouraging. The engine, pitwork, &c., are in good working order. We are getting on with our dressing as fast as possible, but the heavy rains rather impede our progress.

WHEAL DORA.—They are busy bringing up a lobby, which will come into the present shaft; at a depth of 8 fms. the water became so powerful in the shaft, that the whim could not keep it, consequently they were obliged to stop the same; the axle and pins of the wheel are on the ground, and the men are busy cutting the leets and digging out the wheel-pit. The lodes are looking well, and the men working with spirit. There is plenty of water for every purpose.

WHEAL GOLDEN CONSOLS.—At Thomas's shaft, in the 77 fathom level, south, ground moderate, lode 1 ft. wide, and much improved in the last 4 ft. driving, and now producing 5 cwt. of ore per fm.; in the 77 north the ground is good, lode small and poor at present; in the slopes in the back of this level south the ground is good, lode 2 ft. wide, producing 16 cwt. of ore per fm.; in the slopes in the back of the 77 fathom level north the ground is good, lode 18 in. wide, producing 16 cwt. of ore per fathom. In the winze sinking under the 60 north, the ground is moderate, lode 18 in. wide, producing 14 cwt. of ore per fm.; at Webb's shaft, in the 60 south, the ground is moderate, lode large, producing 5 cwt. of ore per fm., with every appearance of an improvement; in the winze sinking under the 60 fm. level, 15 fathoms south of the shaft, the ground is hard, lode 3 ft. wide, producing 5 cwt. of ore per fm.; in the slopes in the back of the 60 fm. level south, ground good, lode 2 feet wide, producing 11 cwt. of ore per fm. At the engine-shaft in the 70 fm. level, south of cross-cut, ground moderate, lode 3 feet wide, producing 11 cwt. of ore per fathom. The tribute pitches are as usual.

WHEAL HAMLYN.—We hope in a month, or less, to cut our east and west lode. We are still driving east on the caunter lode, and find it is changing in its character; we have now more ore, and a quantity of jack. We have discovered at the surface another lode, which is running in right angles with our caunter lode 30 feet wide; they will meet about 10 fms. below the surface. What a won't tin speculation! They are now taking away a part of this great lode in the quarry, and find the stuff to be quite hot, as if there was a large body of ore underneath, which I have every reason to believe there is.

WHEAL MARY (REDRUTH).—On Wheal Mary lode the summen are preparing to sink the engine-shaft below the 100 fm. level. In the 100 fm. level east the lode is 1 ft. wide, with good stones of ore, and looking very promising to make a good lode in this level; in the 100 fm. level west the lode is 8 ft. wide, composed of spar, muncie, and good stones of ore. In the 90 fathom level west the lode is 4 ft. wide, composed of capel and ore, producing about 2 tons of ore per fm., and looking kindly for improvement. In the 80 fm. level west the lode is 2 ft. wide, but poor—the lode is disordered by a slide. The 70 fm. level east is suspended, and the men put to rise in the back of this level, where we have the lode, which we have been sinking for some time. Parent lode, in the 50 fathom level west, is small, but looking very kindly, with good stones of ore. In the 30 fm. level east the lode is small and poor. We have 15 pitches working, at an average tribute of 10s. 8d. in 1½.

WHEAL MARY ANN.—The lode in the deep adit level is still poor, although a great change has taken place, with regard to the lode and the strata through which it runs; it is now 2½ feet wide, composed of capel, killas, and spar. The ground has changed much for the better since my last report, and presents a highly favourable appearance, being a blue killas, highly impregnated with muncie and spots of ore. I trust soon to be able to better this report.

WHEAL PENHALE.—The ground in the 40 fm. level end south continues favourable, and we are progressing better in this end than we have for some time past; the lode is without particular change. The winze sunk from the 30 fm. level south, on the caunter, is now down to the 40 fm. level, and 2 ft. below it for a fork. The lode is found quite as good as at any other place; next week we shall commence driving north-east and south-west, which is on the course of it. We are now extending the cross-cut north of the winze further east, being of opinion we shall find yet another portion of the caunter lode in that direction. The tribute pitches look better than they have for some time past.

WHEAL TOM AND DEER PARK.—The following is the report of Arthur Dean, Esq., C.E., which was referred to in last week's Mining Journal:—

The sett of this mine, upwards of 60 fms. long from east to west, and 400 fms. broad from north to south, is upon the northern slope of Kil-hill, at Deer Park, near Callington. Its southern boundary nearly touches the outcrop of the granite, which dips north beneath the covering of killas or clay-slate upon which the sett is located. The killas is of a fine, soft, unctuous character, somewhat red near the surface, where the particles of iron incorporated with it have been decomposed by atmospheric influence; but beneath it is almost a pure white immediately above the granite, and gradually assumes a blue tint, increasing in degree as the beds extend northward. The greater portion of the killas in this sett present all the characteristics found in the bearing strata of the most favoured mines in the district. The beds strike or bear a little north of east, and south of west, and are intersected by a series of small cross-courses, which incline along the latter westward, which indicates the direction in which the shafts of ore will also dip. Traces of many lodes are visible, but three only have been opened upon, these bear a few degrees south of east and north of west. The most northern, a capel lode, underlies south-west from 2 ft. 6 in. to 3 ft. per fm., averages 3 ft. 6 in. in width, with well-defined walls; and in the trial pits sunk upon its back, is composed of quartz, spar of good quality, peach, and rich gossan—it is a very fine lode. In the eastern part of the sett an adit has been driven west 15 fms. upon its course from Clitter Bottom, a narrow valley, deep groove, cut down at right angles to the flank of the hill by the action, during many ages, of a small stream of water, fed by springs issuing from numerous lodes which cross the bottom; this stream, having a fall of several hundred feet in the sett, will afford many good sites for stamping mills. About 150 fms. further south, the second, or south-west lode runs parallel to the former, is of large size, from 4 to 5 feet underlies north-west about 2 feet per fathom, and is a tin lode on the back, composed of capel, quartz, gossan, arsenical pyrites, or muncie, and iron, and is a remarkably fine lode; with a change of killas in depth it is likely to carry copper ore, as its muncie is more characteristic of the latter mineral than of tin; an adit has been driven west upon it for a few fathoms from Clitter Bottom; and, if continued, which I strongly recommend, will lay open the lode at a depth of 60 fms. beneath a won surface. Between these two, several other lodes and branches are visible in an open drain, brought up through Clitter Bottom. Near the south-east boundary of the sett an adit has been driven into, upon an iron and tin lode, the former underlies slightly north and the latter south; they will form a junction at a short depth beneath the level, and a sink has been commenced to examine them below the point of junction. Immediately without the southern boundary are several north underlying lodes, supposed to be identical with those now wrought at the Holfmush Mine, one mile further west; the immense ancient workings upon the backs attest their value, and show the killas beds in which they are enclosed to be highly favourable to the deposit of ore in the traversing them. Some of the lodes, and all the killas beds, pass into Wheal Tom sett, and the latter may again be found to perform an important part where they fall in with the Wheal Tom lodes. Three important cross-courses are known in the sett, all bearing from 20° to 30° west of north and east of south, and underlying south-west. The first intersects the north lode at about the present end of the adit. The second is about 60 or 70 fathoms further west, and the third 120 fms. still further west. They are found to leave the north underlying lodes to the left hand, and those with a south underlie to the right hand. The chief points of interest in the sett are found where the lode is intersected by the cross-courses, and therefore, I think it to be very desirable that a run of shafts pits should be made upon the west side of the second cross-course, between the north and south lodes, so as to discover the position and bearing of the intermediate lodes, with a view to determine the best sites for two engine-shafts, which should be sunk between the second and third cross-courses, in such positions as will command the greatest number of lodes with the smallest amount of deep work. The distance of 150 fms. between the two principal lodes precludes their being wrought from one engine-shaft only, but the pumping may be effected with one engine. In determining the positions of the shafts, it should be borne in mind that copper and tin ores are generally accumulated in the lodes in the greatest abundance

near to and on the foot-wall side of the intersectors. The surface works consist of a roomy smith's shop lately erected, and preparations for the erection of a water-wheel 25 ft. in diameter, intended to drive eight stamp-heads, and there is also a 32-ft. diameter wheel and other machinery on the ground. Looking at the generally superior quality of the killas lodes, the bold character of the lodes and cross-courses, the excellence of their contents, and the relative natural arrangement, I feel no hesitation in expressing a decided opinion that, with works well planned and carried out, Wheal Tom will become a great and profitable mine.

—Extract of letter from the agent:—"Our late discovery is thoroughly established and fully bears out the opinions of Messrs. Dean and Spargo, and, in fact, all the experienced mining captains who have visited the mine since I last wrote; and as another week will add still more to the important information which I have in my power to give you, I shall defer entering into details until Thursday next, beyond that which I now state as under," &c.

WHEAL TREFUSIS.—The lode has been cut into small in the 24 fm. level, and although it has rather improved in appearance, as yet there is nothing in the lode in this level to value; it is probable that a better lode will be met with in depth, and for that reason we have commenced sinking below the 24 fm. level. We are driving a 24 cross-cut south, towards lodes seen in the adit, price 4½ per fm. The 14 fm. level east continues unproductive. The lode in the adit varies in size from 1 to 3 ft. wide; it is a good gossan, from all appearances, for copper ore. The slopes in the back of the 14 fm. level continue to produce tin stuff of good quality. We have commenced driving an adit upon Trelawny lode, which is 140 fms. north of our engine lode; this lode has a favourable appearance in the back. Although my report is not so good as I could wish, yet it is about the most I can state; and I fully believe and hope that, considering the number of lodes in this sett, if wrought perseveringly, it will ultimately remunerate the shareholders for their outlay. We have in our sett most of the Consolidated Mines lodes; it is true they were wrought in clay-slate, and our formation, or rock, is granite, being the same as Carr Brea, Wheal Basset, South Frances, and North Basset; the lodes of the last mine pass through the south part of our sett. Wheal Trefusis adit is in a clay-slate or killas, which lodes extend through Wheal Trefusis sett in the granite. In conclusion, there are exceeding ten known lodes in the various setts of Wheal Trefusis, and, under all the circumstances before referred to, it is but reasonable to calculate that we shall have a good mine upon some one of the lodes.

WHEAL TREMAYNE.—In the boundary engine-shaft, under the 63 fm. level, the branches are much improved in quality; they are now worth 40½ per fm. In 63 fm. level, driving east of boundary, on the engine lode, the lode is 1 ft. wide, worth 11½ per fm. In the 63 fm. level, driving west of ditto, on the same branches, the branches are worth 17½ per fm. In the winze sinking under the 53 fm. level, west of Allen's shaft, on the south branches, the branches are worth 15½ per fm. At Allen's shaft, sinking under the 53 fm. level, on Allen's branch, the branch is worth 10½ per fm.; the men belonging to the 53 fm. level, east of Allen's shaft, on Allen's branch, are engaged stopping the bottom of the 53 fathom level, to let down water. In the 53 fathom level, driving east of Allen's shaft, on the engine lode, the lode is small and poor; we expect to communicate this level with the eastern lode next week. In the 45 fm. level, driving east of Allen's shaft, on the engine lode, the lode is 7 in. wide, opening tribute ground. At Madron's shaft, on the south lode, in the 70 fm. level cross-cut, the ground is good for driving, and is progressing favourably; ditto west, the lode is 2½ ft. wide, worth 8½ per fm. At Laurie's shaft, on the north lode, the 35 fm. level driving west is communicated with the winze sunk under the 10 fm. level. At middle shaft, on the same lode, the men are engaged cross-cutting the lode in the 10 fathom level, west of middle shaft, to communicate with Chapman's shaft, which will be accomplished in a few days. In the adit level, driving east of middle shaft, on a north lode, the lode at present is small; in this level we have driven through several fms. of lode of a very promising appearance. We shall commence driving a cross-cut north in the 10 fm. level this week, to see this lode at a deeper level, where we expect to see it productive. In the 30 fm. level, driving east of Williams' engine-shaft, on a new lode, the lode is 7 in. wide, producing stones of tin, but not to any value. By a new shaft sinking from surface, on the same lode, we expect to intersect the lode about the adit level; the ground in bottom of said shaft is good for sinking. In the 30 fm. level, west of west winz-shaft, on the south lode, we have driven a cross-cut in the 30 fathom level, to let down water. In the 53 fathom level, driving east of Allen's shaft, on the engine lode, the lode is small and poor; we expect to communicate this level with the eastern lode next week. In the 45 fm. level, driving east of Allen's shaft, on the engine lode, the lode is 7 in. wide, opening tribute ground. At Madron's shaft, on the south lode, in the 70 fm. level cross-cut, the ground is good for driving, and is progressing favourably; ditto west, the lode is 2½ ft. wide, worth 8½ per fm. 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pronounced to be by far the finest work put out of hand by Mr. John House since his employment by this company, though I am sorry to add that, from want of water-power, they are the last set of stamps ever likely to be erected at Morro Velho. At the inauguration of the stamps, when the usual ceremony of naming took place, they were named the "Addison Stamps," in compliment to my respected friend, Robert Addison, Esq., who is not only a director, but has been from the beginning by far the largest shareholder in the company. I sincerely congratulate him and the other directors on getting these fine stamps to work, feeling well assured they will soon amply repay the heavy costs which, during the last six months, we have been forced to submit to, and lead to results more brilliant than have yet been obtained for the company.

Jan. 18.—Gold extracted to date, 6494 ounces, from 485 cubic feet of sand (result of 10 days' stamping), yielding 14.38 oits. per cubic foot. This is indeed a poor commencement of the year; the more so, because with the aid of the new stamps we had a right to expect a considerable addition, instead of so heavy a diminution, of our customary 10 days' produce; and yet, on analysing all the circumstances, this deficiency is not difficult to account for. In the first place, the new stamps worked only six days; in the second place, it is found that the Fuba mill, worked by an undershot wheel, on the Brazilian principle, requires far more water than had been calculated on, causing a serious deficiency of the power now requisite for the upper stamps, and which it is to be feared will continue to a certain extent until the new Fuba mill be erected. The consequence has been that, to keep the Addison stamps going, the Herring stamps have done little more than their proper duty; the effect on the whole of the 10 days' stamping being a falling off of at least 100 tons on the quantity that should have been crushed. While to supply even this diminished quantity, we have been glad to revert to the refuse heap for about 178 tons. But far more mischievous has been the almost unexampled deterioration of the stone sent up from the Bahu Mine, for which, indeed, you will have been partly prepared by my letter of the 8th, and still more by my diary of the 11th instant. During these 10 days the Catherine inclined plane supplied us almost exclusively with wretched stuff from the dump-shaft and its immediate vicinity. While the Herring having at the time only one station (No. 3) for hauling, was thereby confined exclusively to a bar of killas running across the east Quebra Panela, and, as mentioned in my last, the very worst stuff of the kind I ever saw. Dividing, then, the 2046 tons stamped under their separate heads, we find—

1475 tons on great spalling floors, at an average of 3.8 oits. per ton, yield 5605 oits
178 tons from the refuse heap, at 1½ oit. per ton 267
393 tons to new spalling floor (per Herring's inclined plane) at 1½ oit. per ton... 591

Total 6462 oits.

Approaching very closely to the produce actually obtained. Even for the second division of the month through which we are now passing, though I hope the produce will be better than that which I have now had to communicate, it is to be feared it will be far from good, knowing that up to the 14th we had no improvement in the Bahu stone, and that, though somewhat better than that day, it has not been such as we could have wished. Yet, however grievously disappointed you may justly feel at this bad commencement, I must say that my hopes for the future are by no means diminished, as the cause of the disappointment appears to me to be principally of a temporary nature. Stamps working 17 days, average 111.24 heads. The supply of stone from the mine has not been sufficient for our wants since the Addison stamps went to work, in consequence whereof we have been obliged to stamp not only every stone, good or bad, sent up from the mine, but even to have recourse to the refuse heap. This is owing, in some degree, to the disordered state of the mine, consequent partly upon the alteration made in the direction of the Bahu dump-shaft, partly on the laying down of the Herring inclined plane having so long interfered with the regular order of stamping. As yet everything is new—new stamps, new inclined plane, new rollers, new dump-shaft. By-and-bye we may expect to see everything fall back into its accustomed order, when fewer interruptions will occur, and the work be done by the hauling machine more satisfactorily.

Jan. 28.—Gold extracted to date, 13,718 oits., from 968.15 cubic feet of sand (result of 20 days' stamping), yielding 14.17 oits. per cubic foot. The first 10 days yielded 6494 oits. from 3046 tons = 3.17 per ton, and 649 oits. per day. The second 10 days yielded 7224 oits. from 2147 tons = 3.37 per ton and 722 oits. per day. These ten days, then, as I ventured to predict in my last, show a little improvement in the first ten days, though still very far below what we might have looked for from our increased force. From previous appearances, and the marked improvements of the stone, I think I may venture to anticipate a still greater improvement in the produce of the last division of the month through which we are now passing, unless materially interfered with by some untoward accident to our water-courses. Stamps working 27 days, average 114 heads. The supply of stone has become more abundant since the 20th, and has enabled us now at length to dispense with the supplies we had been forced to draw from the refuse heap.

Gold remittance, arrived 14th March, per Tivoli, 47,471 oits. = 159.52 lbs. troy of gold.

THE KAW-AW MINES (NEW ZEALAND).—

Auckland, Oct. 28.—The lode at Kaw-aw is very regular, having no branches; it averages about 9 ft. in width, or at least, in many places, and generally all along the south side, so poor as hardly worth removal; the ore consists of a light bluish pyrite, a branch here and there being as rich as 20 per cent., but seldom averaging more than 7 per cent., and passing gradually into mudstone, containing a trace only of copper, with scarcely a trace of spar or other foreign matter. This being the character of the ore, it is obvious that its quality cannot be improved by dressing, the mudstone being as heavy as the ore, and hardly distinguishable by the eye; and as the freight and sale expenses amount on average to 3½ per cent., it is clear that this mine can only pay by smelting the ore in some degree on or near the spot, and that its value must be entirely dependent on the success attainable in its operation.

A sufficient experience convinces us that, under good management, vast quantities of ore may be raised, at a cost not in excess of 25s. per ton, and we assume 6 per cent. as a very low average. Now, if three tons of this could be converted into one of regulus, at a cost of 3½, which, we think, ample. The regulus of 18 per cent. would cost here 6d. 15s., and 9d. 15s. when sold at Swansea, which, at the present standard, would give a profit of about 4d. 10s. per ton of regulus, or 10½ per ton of ore, to cover the general management, interest of capital, &c.

But it would be absurd to expect any such results without a total change of management. It is impossible to convey an adequate description of the blundering absurdity of the present management; mere ignorance might have made equal mistakes at first, but the perversity with which they have been adhered to require, in addition, a most dogged determination not to be taught by experience.

[Here is inserted a description of an accompanying tracing from the ground plan of the surface work of the two mines, which is useless without the drawings—it concludes thus:—The lode was very visible running through the point before the mine was opened, its back consisting of enormous red gossan rocks, which projected from the hill, and strewed the beach in every direction. Its underlie is not very regular; in our part of it, above the 9 ft. level, it is to the north 11 ft. per fm., but between that and the 15 ft. level its underlie is slightly to the north.]

The company's workings consist of an adit level, driven on the course of the lode, from the vicinity of their engine-shaft, to a considerable distance—I believe 120 fms. inland. Above this a small branch or cut has been found, but I am informed that near the end the lode has disappeared, or, at least, become very small indeed. The engine-shaft is sunk 16 fms., and levels driven from it at 9 and 16 fms., so as to communicate with our 9 ft. level to the westward, and extending a very considerable distance to the eastward. In the latter direction the lode has ceased to contain ore, but I believe looks kindly. The greater part of the ore between the two levels has been removed.

To the eastward of the engine-shaft, a shaft called Minnis, has been sunk from the top of the hill to communicate with the 16 ft. level, and by an odd arrangement, instead of sinking the engine shaft, this shaft was sunk 24 fms. below the adit, and a cross-cut driven from it to intersect the lode, the water being raised by hand to the 16 ft. level. At this point, I learn that the lode contains no ore, as might have been expected, as it contained none so far east on the shallower levels, all the branches dipping west; and as the engine is quite insufficient to draw it by such a length of flat-rods, they have been unable to proceed to drive the shaft towards the engine shaft. There is another shaft sunk from the top of the hill, far to the eastward of Minnis shaft, but at what distance, or for what purpose, I am not aware.

The above ground works are—The engine of 12-horse power, but worked only to about 8-horse, being connected direct with the pumps, and so only able to work at a slow speed; an immense cistern, elevated on posts, up to which the engine (standing below on the ground) raised the water, in order to let it fall upon Capt. Minnis's water-wheel, for crushing the ore—a notable hydraulic discovery of his, by which a body of water is made to give out more effective power than it took to raise it through the same space—and a few small shafts of a very temporary description, the ore floors, made by the throwing out of rubbish from the mine, slightly confined on the outer side by piles of stones, up, and very much too small, but can easily be extended, and would then afford every convenience for piling and shipping of ore, &c.

Our workings consist of the engine-shaft, sunk some feet to the north of the lode, which is reached by a cross-cut at 9 fms., and at 15 fms. deep. On the course of the lode we have driven east nearly as far as the end of our blacksmith's shop, and to 13 fms. west of the end of the cross-cut in the 9 ft. level, and nearly 10 fms. further west in the 15 ft. level. Winzes have been sunk in each end of the 9 ft. level, and a few hundred tons of ore stopped away from both sides of the western one, where it averages about 10 per cent.; the available ore remaining between the levels is estimated at about 1000 tons, averaging 7 or 8 per cent. At 4 fms. west of the western winze, in the 14 ft. level, the lode suddenly contracts from 12 feet or more to a mere flookan vein, scarcely 3 in. wide, which 2 or 3 fms. further on begins to increase, and contains quartz mixed with much mal-leable copper, of which the country then becomes full, being intersected by many small veins, containing strong flakes, and dentritic crystals of it. When we discontinued working, the vein was 6 or 8 in. wide, looking very kindly. This fault dips west as much as 9 ft. in a fm., so that in depth there is every reason to suppose that the ore will continue to be found much further west. It will thus be seen that the lode has been but very superficially explored; that there is not more than from 2000 to 3000 tons of ore in sight, although averaging not more than 8 per cent., but a course of ore quite as good, and averaging 6 ft. wide, runs along the bottom of the 16 ft. level of both mines, for at least 40 fms.

The water of the two mines, after stopping the leak caused by the removal of the wharf, which is not at all formidable, is about 300 gallons per minute, to raise which there are on the ground two engines, each 12 in. cylinder, and, when properly connected with the works, quite capable of draining the mines for the present; but, of course, a pumping-engine would do it so much more effectually and economically, so that it is of prime necessity. Besides this ore in sight, and under foot, the ends, or one of them at all events, looks quite sufficiently promising to justify further explorations; and it may safely be said that there is enough now in sight certainly to pay the expenses for the next year or two, and to make explorations, which, there is every reason to believe, would discover much larger, and perhaps richer, ore ground on the north side of our shaft. There is, however, some appearance of the back of a lode, and as the shaft on that side becomes thickly coated with green (oxychloride of copper), we have driven a small cross-cut 9 ft. level in that direction. At a distance of 18 ft. from the shaft, we have found what appears to be a lode, consisting of spar and gossan, and containing beautiful stones of oxide of copper—some of them producing 7 per cent. of copper. Circumstances at the lode did not allow us further to explore in the direction, but it is well worth a trial, though seems very improbable that a large lode, containing ores of the oxide of copper, should be found running parallel within 30 ft. of a large champion lode of sulphurets.

WEST POLGOOTH TIN MINING COMPANY.—This mine, formerly worked under the name of Wheal Prosper, and situate in the parishes of St. Ewe and St. Mewan, near St. Austell, is, as will be seen by the prospectus in our advertising columns, about to be worked by a company under the above title. Being situated between the Great Polgooth and Great Hewan Tin Mines, which above the 110 and 128 ft. levels, respectively, have returned immense quantities of ore, and the same lodes running through the set, this mine being down only to the 34 ft. level, there is every probable reason to believe that there are 70 fms. of rich ore ground in store before reaching the depth of the Great Polgooth Mine. An engine-house, steam-engine, and machinery, have been erected, and the mine is in a position to proceed to immediate operations, as soon as the capital is raised. All the mining agents in the district, who know the mine, speak of its prospects in the highest terms, and several reports will be found appended to the advertisement.

LATEST CURRENT PRICES OF METALS.

LONDON, MARCH 21, 1851.

ENGLISH IRON. a		per ton	ENGLISH LEAD. g		per ton
Bar, bolt, & square, London	25	5 0-10	Tin	£63	0 0
Nail rods		6 0-6 15	Old copper	per lb.	8½d
Hoops		7 0-7 15	Yellow Metal Sheathing		7½d-8d
Sheets (single)		7 12 6-8 5	Wetterstedt's Pat. Metal	Out.	1 12 0
Bars, at Cardiff & Newport	4	12 6-4 17 6	FOREIGN COPPER. f		
Refined metal, Wales*	3	10-3 15	South American, in bond	77	0-87 0
Do. anthracite*	3	10 0	ENGLISH LEAD. g		
Pigs in Wales	3	0 0-3 15	Pig	10	10-17 15
Do. do. forges	2	8 0-2 10	Sheet	18	10-18 15
Do. No. 1, Clyde	2	1 0-2 2	Pipe		19 0 0
Blewitt's Patent Refined Iron	3	10 0	Red lead		19 0 0
for bars, rails, &c., free on board at Newport	3	10 0	White ditto		24 0 0
Do. do. for tin-plates, boiler plates, &c., ditto	4	10 0	Patent shot		20 10 0
Stirling's Patent 7 in Glasgow	2	15 0	FOREIGN LEAD. h		
Toughened Pigs in Wales	3	10-3 15	Spanish, in bond	16	10-17 15
Staffordshire bars, at the works	5	6-6 0	ENGLISH TIN. i		
Rails	4	17 6-5 5	Block		4 8 0
Chairs (Clyde)	4	0 0	Bar		4 9 0
			Refined		4 14 0
FOREIGN IRON. b			FOREIGN TIN. k		
Swedish	11	10-12 0	Banca, H. C.		4 8 0
CCND	17	10 0	Straits		4 7 0
PSI	—	—	TIN-PLATES. l		
Gourieff	—	—	IC Coke		1 7 6-1 8
Archangel	—	—	IC Charcoal	12	6-1 13 0
			IX ditto		1 19 0
FOREIGN STEEL. c			SPELTEN. m		
Swedish keg	15	0-15 10	Plates, warehouse	15	7 6-16
Ditto fagot	15	0-15 16	Ditto, to arrive	15	7 6-16
ENGLISH COPPER. d			ZINC. n		
Sheets, sheathing, & bolts, p. lb.	0	5½	English sheet	per ton	21 0-21 10
Tough cake	per ton	84 0	QUICKSILVER. o	per lb.	3s. 9d.
Terms. — a, 6 months, or 24 per cent. dis.; b, ditto; c, ditto; d, 6 months, or 3 per cent. dis.; e, 6 months, or 24 per cent. dis.; f, ditto; g, ditto; h, ditto; i, ditto; k, net cash; l, 6 months, or 3 p. ct. dis.; m, net cash; n, 3 months, or 14 p. c. dis.; o, ditto, 14 dis.			† Dis. for cash in 14 days, 10 per cent.		
* Cold-blast, free on board in Wales.					

Terms.—a, 6 months, or 24 per cent. dis.; b, ditto; c, 6 months, or 3 per cent. dis.; d, 6 months, or 24 per cent. dis.; e, ditto; f, ditto; g, ditto; h, ditto; i, net cash; j, 6 months, or 3 p. cent. dis.; k, net cash; l, 3 months, or 1½ p. cent. dis.; m, ditto, 14 days. Cold-blast, free on board in Wales. n Dis. for cash in 14 days, 10 per cent.

WELSH BAR-IRON is in moderate demand; the accounts from the United States are not so encouraging to shippers. Rails are in good request; several special agents from America are here, endeavouring to purchase on debenture payments. STAFFORDSHIRE IRON—A good business doing. SCOTCH IRON—Now has submitted to a decline of 1s. per ton. SWEDISH IRON—Several sales have been effected for spring shipments. SWEDISH STEEL in fair request. COPPER remains the same as last week. YELLOW METAL SHEATHING—A fair business doing. BRITISH TIN is in small demand. FOREIGN TIN—Not any bargains have transpired. SPLITTER.—A parcel of 120 tons, which was held by a speculator for some months, has been forced on the market, and realised 15½ 17s. 6d. The stocks at Hamburg and Stettin are unprecedentedly low, and the last quotations from these are equal to 16½ 10s. delivered here.

LEAD is very firm. TIN-PLATES are less inquired for, and prices are 6d. per box in favour of the buyer.

GLASGOW, MARCH 20.—The pig-iron market remains very flat, and prices are still declining, for although the shipments are good, as well as the local consumption, there can be no doubt that the production is too large, and until this is curtailed the trade will not have any confidence. Mixed Nos. good brands, free on board here, are quoted 4½s. per ton cash; all No. 1, 4½s. 6d.; Galvanised No. 1, 4½s. There is still a good demand for manufactured iron in prices without alteration.

NEW YORK, MARCH 5.—In iron there is a fair business doing in Scotch pig at about previous quotations. Some 150 tons changed hands at \$22, six months. Nothing of moment doing in English bars, which continue dull at \$40, six months: to effect sales it is expected holders would have to reduce their pretensions. In lead, American is in limited supply, at \$5 cash per 100 lbs.; 50 tons of Spanish had been taken at \$4 70 c., also for cash. No important change in copper since last report, while the demand for sheeting is firm at 21 c., and yellow metal (English) at 18½ c. cash. Old is quiet; the last sale was at 19½ c. cash. Sales of 15 tons of spelter have been made on terms not made public. Banca tin firm at 21 c.; plates bring \$10 30 c., six months; 2000 slabs were sold on private terms.

BOMBAY, FEB. 15.—The only sales reported during the fortnight are 400 cwt. of copper, at rs. 444 per cwt. and 350 bundles sheet-iron, at rs. 4 5 ann. per cwt. Sheet-iron and braziers' copper, and nearly all descriptions of British and Swedish iron, have declined in value. Swedish steel remains as last reported. Lead, both sheet and pig, is dull of sale, and lower in price. In tin-plates and spelter there has been nothing doing.

CALCUTTA, FEB. 9.—The metal market, generally speaking, is extremely dull. Copper has declined particularly as regards tin, and sheeting has been only moved at the reduction which took place a fortnight since. In spelter there has been a little better business doing, but demand has been more general, which has led to some amendment in value; we hardly anticipate any further improvement. Iron of all descriptions has occupied a very depressed position. Holders have latterly been pretty free sellers at low rates, and, consequently, a less restricted business has been done. Flat bar, and bolt has been selling as low as rs. 1 13 ann. per md. The market has yet a declining tendency, stocks being heavy of all kinds.

CANTON, JAN. 27.—Lead: no stock, but wanted: would command \$6 80 c. to \$7 20 c.

New Patents.

LIST OF PATENTS GRANTED DURING THE PAST WEEK.

- G. Little, of New Beckham, electro-telegraphic engineer, for improvements in electro-telegraphs, and in various apparatus to be used in connection therewith, part of which improvements are also applicable to other similar purposes.
- H. Taylor, of Cross-street, Finsbury, Middlesex, merchant, for certain improvements in the manufacture of carbonates and oxides of barium, and strontia, sulphur, or sulphuric acid, from the sulphates of barium and strontia, and for consequent improvements in the manufacture of carbonates and oxides of soda and potash.
- R. A. Broom, of the firm of J. C. Robertson and Co., of Fleet-street, London, patent agent, for an improved method of manufacturing screws.
- H. Minton, of Hart's-hill, Stafford, gentleman, and A. J. Hoffstadt, of Bridge-street, Blackfriars, London, gentleman, for improvements in the manufacture of faces or dials, for clocks, watches, barometers, gas-meters, and mariners' compasses, or other articles requiring such faces or dials.
- A. Robertson, of Holloway, Middlesex, engineer, and J. Glover, of the same place, roller, for improvements in the rolling and laminating of metals, and in the manufacture of metallic cases and coverings.
- H. Bessemer, of Baxter-house, Old St. Pancras-road, Middlesex, engineer, for improvements in the manufacture and refining of sugar, and in machinery or apparatus used in producing a vacuum in such manufacture, and which last improvements are also otherwise applicable for exhausting and forcing fluids.
- J. Hart, of Seymour-place, Middlesex, for improvements in the manufacture of bricks, tiles, and other articles made from plastic materials, and in the means of making parts of the machinery used therein.
- E. Vezey, Bath, box hoop, or cap for carriage spring.
- F. Ayckbourn, and L. Cobian, Strand, folding boat.
- G. Holcroft, Manchester, steam-boiler.
- C. Marsden, Waterloo-house, Kingsland, syphon funnel.
- Business and Shapins, Bell-court, Cannon-street, enlarged heating surface bottom for copper, pots, and kettles.
- H. S. Rogers, Basinghall-street, child's velocipede carriage.
- J. Phillips, Lambeth, greenhouse gas stove.
- T. Fillary, Coldbath-fields, land-labor machine.
- H. Earnshaw, Wimpole-street, dumb jockey.
- J. Blair, Esq., Jan., Camphill, Irving, Ayr, military tourists, and emigrants portable couch or bedstead.
- W. R. Bangust, Hackney, the palatal A-Tergo shirt.
- I. Anderson, Elgin, N.B., car.
- B. Black, South Molton-street, carriage lamp.
- A. and E. Stone, Brompton and Margate, self-acting and regulating effluvia preventive.
- E. Chamant, South-street, Finsbury, stick-smoking pipe.
- H. Hicks, Davies-street, ottom saddle.
- Robertson, Carr, and Steel, Sheffield, radiating and reflecting register stove grate.
- H. W. Keele, Isle of Wight, calendar or date indicator; the hemoragist.
- J. L. Stevens, Cophall-buildings, omnibus ventilator.
- W. F. Ross, Bishopsgate-street Within, peruke spring.
- J. Abernethy, T. Denman, North-street, Hackney, water closet.
- R. Dax, Welchpool, Montgomeryshire, nose and hand horse stopper.
- H. Freeman, Fuddington, ventilating shield cowl.
- A. Adams, Lime-street, sanitary drain trap.
- M. Ness, Huddersfield, window cleaner.
- J. Farquharson, Great Ealing, spring stump for a wooden leg.
- H. Greaves, Manchester, coupling for rails, and for connecting rails to sleepers.
- B. Clarke, M.T.C.S., Chelsea, anti-apoplectic or self-adjusting shirt.
- H. Laxton, Pall-mall East, parlour cooking stove.
- W. and S. Dingley, Silver-borne, protector (coat).
- W. Stahl, Great Fintenny-street, divider and callipers.
- A. R. Peel, Strand, hippolytic tug (harness).
- W. S. Adams, Haymarket, tap.—*Mechanics' Magazine.*

PROVISIONAL REGISTRATIONS.

- W. R. Bangust, Hackney, the palatal A-Tergo shirt.
- I. Anderson, Elgin, N.B., car.
- B. Black, South Molton-street, carriage lamp.
- A. and E. Stone, Brompton and Margate, self-acting and regulating effluvia preventive.
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- A. R. Peel, Strand, hippolytic tug (harness).
- W. S. Adams, Haymarket, tap.—*Mechanics' Magazine.*

LONDON AND BIRMINGHAM EXTENSION RAILWAY.—After considerable discussion, it was agreed that the claim of Mr. Pritchard, the engineer, of 5000l. against this estate, should be referred to the arbitration of counsel. There are between 15,000l. and 20,000l., consisting of claims to be disputed, to be brought in by Mr. Croysdill, the official manager, and his solicitors, Messrs. Hanslip and Manning.

KOLLMANN'S RAILWAY LOCOMOTIVE COMPANY.—After considerable discussion, Master Kinderley has declared a final call of 9½ per share on the shareholders in this company, which it is estimated will suffice to wind up the affairs.

SEA, FIRE, LIFE ASSURANCE COMPANY.—A claim of Mr. C. T. Pratt, in respect of a bill of exchange for 3000l., brought in to be allowed under this estate, was opposed by Mr. Galsworthy, solicitor to the official manager (Mr. Ernest), on the ground of informality on the face of the bill, and its being negotiated by Mr. Augustus Collingridge, the managing director of the company (by whom it was drawn in his own favour), after the company had failed.—His Honour intimated that he should send the claim to be tried at common law.

Current Prices of Stocks, Shares, & Metals.

MINES.—An active business continues to prevail in our market, but, probably owing to the violent fluctuations in railway stock, with less inquiry for dividend mines, influenced also by the new projects bringing forward, and their absorption not only of a large amount of capital, but the attention of speculators. It is gratifying again to remark that considerable success is attending the workings of several recently-established mines, and others of standard value, both in the east and west of our mining districts, the shares in which have advanced in proportion, and considerable business transacted in them. We renew our caution to speculators to study the terms of a prospectus of every new mining set, and to spread their capital over a number rather than embark largely in one venture.

In the Metal Market, Copper is in fair demand.—Lead is steady, with a good business.—English Refined Tin moves off tolerably well, but bars and blocks are almost unsaleable.—Foreign Tin is very dull, and prices are rather easier: the clearances for home consumption continue large.

Wheal Trevelyan sold 140 tons of silver-lead ore—100 of which realised 22½ 12s., and 40 (No. 2), at 1½ 16s.—being upwards of 2330l. for the month. The Herodfoot Feb. ores, 80 tons, realised 12½ 15s. per ton = 1020l. Esgrail Lee have 25 tons of lead ore ready for sampling. Cwm Erfin dressed 17 tons of ore last month, and the same quantity is expected this month.

At Lewis, 31½ tons of tin ores were sampled on the 11th inst. At Treylon Consols, the tin lode is said to be as good as ever, and is being extended on east and west. The shaft has been sunk about 9 fms. below the 32 ft. level, and the lode holds down good.

At Wheal Hamlyn a lode has been cut, 30 feet wide.

At New East Crowndale preparations are making for a new steam-engine, to enable them to explore the lode at a deeper level, which the prospects at the 14 and 24 ft. levels fully warrant. The necessary buildings, smithy, carpenters'-shop, and material-house, are all in progress, with every possible dispatch.

We are pleased to find that the dispute between Camborne Consols and Camborne Vean adventurers, respecting the ore, to which we referred in our last, is in a fair train of settlement by arbitration.

A highly-interesting paper, detailing the satisfactory progress of mining operations in Cardiganshire, will be found in another column.

At Wheal Buller meeting, held at the mine on Tuesday, the accounts for Jan. and Feb. showed—Balance from last account, 1100l. 14s. 4d.; ores sold (less dues), 4376l. 7s. 6d. = 5477l. 1s. 10d.—To costs and merchants' bills, 1150l. 17s. 5d.; new engine, 900l.; dividend of 20l. per share (2560l.) leaving balance in favour of adventurers, 866l. 4s. 5d.

At the Trevelyan bi-monthly meeting, on Monday, the accounts showed—Ores sold (less dues), 2457l. 8s. 7d.; junk sold, 50l.; fines, 2s. 2s. = 2509l. 10s. 7d.—Mine cost, 717l. 5s. 7d.; tribute of ore, 208l. 18s. 11d.; merchants' bills, 152l. 4s. 3d.; Trevelyan adventurers' water charge, 209l. 0s. 11d.; showing profit, 1222l. 0s. 11d.; add balance in hand end November, 13l. 5s. 2d. = 1235l. 6s. 1d.—By dividend of 10l. per share (1200l.) leaves now in hand, 35l. 6s. 1d.

At the Botallack quarterly meeting, on the 14th inst., the accounts were examined and passed, showing—Balance last account, 179l. 5s. 2d.; labour cost, Oct., Nov., and Dec., 1705l. 4s. 9d.; rent of stamps, 51l. 6s.; carriage of materials, &c., 71l. 7s. 7d.; ditto tinstuff and tin, 132l. 10s. 6d.; coals, 180l. 0s. 10d.; merchants' bills, 459l. 8s. 10d.; dues, 145l. 15s. 2d. = 2924l. 12s. 10d.—By tin sold, 60 tons 3 cwt. 0 qrs. 20 lbs., 3387l. 14s. 2d.; tributes of leavings, 110l. 10s. 4d.; sundries, 7s. 3d.; leaving balance in favour of adventurers, 580l. 14s. 8d. A dividend of 5l. per share was declared, and the report of the committee, recommending a further delay in the erection of stamps, was adopted.

At Wheal Margaret meeting, a dividend of 3d. per share (336l.) was declared, leaving balance in hand of 64l. 6s. 2d.

At the Perran and St. George meeting, on Wednesday, the accounts showed—Copper ore sold (less 1-20th dues and income-tax, 139l. 8s. 8d.), 2733l. 0s. 2d.—Mine cost for Nov., 714l. 6s. 3d.; Dec., 429l. 6s. 4d.; merchants' bills, &c., 500l. 2s. 9d. = 1643l. 15s. 4d.: leaves profit, 1089l. 4s. 10d.; add balance of last account, 1249l. 18s. 7d. = 2339l. 3s. 5d.—By dividend of 25s. per share (1450l.) leaves balance to next account, 889l. 3s. 5d.

At the Alfred Consols meeting, at the mine on the 11th inst., the accounts were examined and passed, showing—Balance from last account, 356l. 17s. 4d.; ore sold, Jan., 1332l. 13s. 8d.; ditto Feb., 1519l. 7s. 5d.; ditto lead ditto, 17l. 15s. 5d.; sundries, 1l. 16s. 5d. = 3228l. 10s. 3d.—By labour cost, Dec., 484l. 1s. 4d.; ditto Jan., 409l. 17s. 2d.; doctor and club, 13s. 19s.; subsist, 29l. 12s.; merchants' bills, 646l. 19s. 6d.; lord's dues, (1-18th), 159l. 8s. 8d.; leaving balance in favour of the mine, 1484l. 12s. 7d.; deduct dividend, 5s. per share (280l.), leaves in hand, 204l. 12s. 7d.

At the Great Wheal Alfred meeting, at the mine on the 11th inst., the accounts were examined and passed, showing—Received on calls, 2048l.—By labour cost, Dec., 100l. 2s. 4d.; ditto Jan., 177l. 12s. 9d.; merchants' bills, 425l. 5s. 10d.; leaving balance in hand, 1344l. 19s. 1d. The third instalment of 1l. on the call of 3l. per share is to be collected forthwith.

At the Consols Mines meeting, at the mine on Wednesday, the accounts for Jan. and Feb. showed—Balance from last account, 1272l. 3s. 8d.; ores sold (less dues), 4881l. 13s. = 6153l. 16s. 8d.—To costs and merchants' bills, 5719l. 11s. 7d.; leaving balance in hand, 434l. 5s. 1d.

At Wheal Trefusis meeting, at the mine on the 10th inst., the accounts showed—Mine cost for Nov. Dec. and Jan., 349l. 0s. 5d.; merchants' bills, 128l. 7s. 5d. = 477l. 7s. 1

At the St. Aubyn and Grylls meeting, on the 12th inst., the accounts were examined and passed, showing—Balance in pursuer's hands last account, 225l. 8s. 8d.; copper ores sold, 358l. 13s. 9d.; tin ditto, 173l. 5s. = 787l. 7s. 5d.—By labour cost, Oct., Nov., and Dec., 609l. 18s. 7d.; lords' dues, 29l. 11s.; paid for deeds, 59l. 13s. 8d.; merchants' bills, 81l. 12s. 1d.; leaving balance in favour of adventurers of 6l. 12s. 1d.—A report from the agent was read, which stated the mine to be in a satisfactory position.

At Wheal St. Agnes meeting, on the 13th inst., Capt. Richard Newton was appointed agent, Mr. Thomas Blenkinsop the purser, and Messrs. Lambick and Whitworth joint surgeons: 10l. was granted as compensation to the agents for obtaining the grants, and who were directed to take the most effectual steps for the immediate prosecution of the mine. A call of 10s. per share was made. Capt. Newton's report stated that the mine was situated in one of the best districts for tin, in St. Agnes, at the base of the Beacon Hill, where, from time to time, large returns have been realised. Three lodes have been worked on, but unexplored to any extent; and on driving a cross-cut on the Great Seal Hole cross-course several other promising lodes will be cut. It is said that, on the Papone lode, the ancients left a course of tin, where pitches may be set as soon as the level is cleared up. The appearances are generally considered highly favourable. It is somewhat remarkable that of the 256 parts into which the mine is divided there should be 75 holders all residing in the county, and chiefly mine agents.

At Trannack and Bosence meeting, on Friday, the accounts showed a balance in hand of 91l. 4s.; in addition to which ores were sold on the 13th for 280l.

At Wheal Vincent two-monthly meeting, on the 17th inst., Mr. Adam Murray (the superintendent) read a very satisfactory report from Captain Reynolds. The January cost, 69l. 18s. 11d., and miscellaneous charges, made the total payments 120l. 18s. 11d. Some demands made by Capt. Spargo, for salary and the erection of a wind-machine, are to be resisted—the latter "being useless when erected, and for which no precedent exists in mining annals." A call of 5s. per share was made. Two tons of ore will be ready for sale by the end of the month.

At Warleggan Consols bi-monthly meeting, on the 11th instant, the accounts showed balance in favour of mine, 111l. A call of 1s. 6d. per share was made for further working. The machinery in course of erection on the south part of the set is progressing satisfactorily.

At Peter Tavy and Mary Tavy meeting, on Monday, to confirm the call of 1l. per share declared on the 8th inst., 782l. out of the 1000l. was paid by the adventurers present. This looks wholesome, and augurs well to the adventure they are embarked in.

The Bryn-Arian meeting, on Thursday, was adjourned until Monday, the 31st inst., with a view to place the property, which the shareholders consider most valuable, upon an advantageous footing. The future management, and the propriety of making alterations therein will be considered, as also the financial position, the propriety of making a further call, and the forfeiture of shares in arrears.

At Tolcarne meeting, on Monday, the accounts showed—Balance end of Oct., 965l. 3s. 9d.; mine cost for four months ending Feb., 387l. 9s. 11d.; merchants' bills, 248l. 1s. 1d. = 1600l. 14s. 9d.—By call, 1265l.: leaving balance against mine, 335l. 14s. 9d.—A call of 10s. per share was made.

At West Alfred meeting, on the 14th inst., the accounts showed a balance against the company of 915l. 5s. 10d., and a call of 1l. per share was made. The prospects of the mine are reported as very encouraging.

At the East Baleswidden meeting, on Thursday, the accounts were examined and passed, showing—Calls, 548l. 5s.; tin sold, 20l. 3s. = 568l. 8s. By mine costs to 9th Jan., 89l. 14s. 6d.; ditto 12th March, 370l. 0s. 9d.: leaving balance in hand, 108l. 12s. 9d. The assets were, above balance, 108l. 12s. 9d.; arrears of calls, 51l. 15s.; call made this day, 300l.—The liabilities were, balance mine cost to 31st of Jan., 34l. 4s. 4d.; costs, Feb. and March, estimated 400l.: leaving balance in favour of adventurers, 26l. 3s. 5d. A call of 10s. per share was made.—Dr. Heathcock, Captain Ambrose, and Mr. James Forsyth, were elected the committee of finance for the ensuing two months, and Mr. Adam Murray, jun., the inspector. The agent's report was considered satisfactory.

At the Wheal Augusta two-monthly meeting, on Thursday, the accounts were examined and passed, showing—Calls, 379l. 17s.; tin sold, 53l. 7s. = 433l. 4s.—By mine costs to Jan. 9, 89l. 10d.; ditto March 12, 316l. 18s. 3d.: leaving balance in hand, 26l. 15s. 9d. The assets were, above balance, 26l. 15s. 9d.; arrears of calls, 130l. 3s.; ore in stock, 15l.; call made this day, 450l.—The liabilities were, mine cost balance to 31st Jan., 241l. 18s. 3d.; ditto Feb. and March, estimated 312l.: leaving balance in favour of adventurers, 68l. 0s. 6d. A call of 5s. per share was made. Messrs. Cheston, Wilson, and Dr. Heathcock, were elected the finance committee for the next two months, and Mr. Adam Murray the inspector. The agent's report was considered satisfactory and encouraging, and much gratification was expressed at the fine specimens of tinstuff which had just arrived at the office, intended for the Exhibition.

At the West Wheal Virgin two-monthly meeting, on Thursday, the accounts were examined and passed, showing—Amount of calls received, 503l. 12s. 6d.; tin sold to Jan. 9, 71l. 10s. 6d.; ditto March 12, 40l. 8s. 6d. = 615l. 11s. 6d.—By mine cost to Jan. 9, 254l. 16s. 2d.; ditto March 12, 266l. 13s. 5d.: leaving balance in hand, 94l. 1s. 11d.—The assets were the above balance, 94l. 1s. 11d.; arrears of calls, 81l. 7s. 6d.; ore in stock, 15l.; call made this day, 60l. = 250l. 9s. 5d.—The liabilities were, balance of mine costs to end of Jan., 112l. 16s. 7d.; Feb., March, and April, estimated 130l.: leaving balance in favour of adventurers, 7l. 12s. 10d. A call of 2s. per share was made. Messrs. Cheston, Wilson, and Dr. Heathcock, were elected the finance committee for two months, and Mr. Adam Murray, jun., inspector to the mine. A report from the agent was read, which was satisfactory.

At the Tremar Copper Mine first general meeting, at Liskeard on the 12th inst., the proposed rules and regulations were agreed to, and signed in the cost-book by the shareholders present. Messrs. Peter Clymo, T. Kittow, Peter Roskilly, J. Osborne, and William George were chosen as the committee of management; Messrs. Wm. Channing and John Jury, pursers, at a salary of 4l. 4s. per month, including expenses; and Capt. Wm. Rule, managing agent, at 3l. 3s. per month. The cost-sheet, amounting to 50l. 9s. 11d. was passed; a call of 5s. per share was made; and an account opened with the Devon and Cornwall Bank, Liskeard. A report was read from Capt. Rule, describing the present and intended operations, which was approved of. It was also resolved, that "in consequence of the value of the discoveries, Messrs. Clymo and others be not called on to pay on their 424 shares—the produce on the remaining being expended in preliminary expenses, cost of set, leases, &c., the call now made to be entirely appropriated to working the mine."

At the Tregadock meeting, on Thursday, the accounts showed a balance in hand of 23l. 12s. 9d. A call of 10s. per share was made.

At Wheal Lemon meeting, on the 10th instant, the accounts were examined and passed, showing—Balance last account, 48l. 3s. 7d.; mine costs and merchants' bills, 193l. 13s. 9d. = 241l. 17s. 4d.—By calls, 150l.; tin sold, 12l. 4s. 5d.: leaving balance against the adventurers of 79l. 12s. 11d. A call of 10s. per share was made, and it was resolved that the agents be authorised to look out for an engine not less than 60-inch cylinder, and proceed to make the necessary preparations for the same; that Mr. R. Michell be appointed purser, and Capt. Matthew White agent of the mine, each at a salary of 2l. 2s. per month. A report from Capt. R. Williams was read, which stated that this mine was worked 50 years ago, but the water became too powerful for the 30-in. cylinder engine; that a Mr. Peto took new sets, and ordered a 60-in. engine, but dying, the mine was again abandoned, and has been idle since. A high opinion was always entertained of the south lodes in this mine. A lode 3 ft. to 5 ft. wide has been opened on by the present company of a very promising character; the adit has been cleared, the water let down from the south lodes, and great expectations are entertained of the eventual results.

In Foreign shares, transactions have taken place in United Mexican, Coppo, St. John del Rey, Cobre, Santiago, Imperial Brazilian, and Worthing.

At the Barossa Range Mining Company's adjourned meeting, on Saturday, the report of the directors stated that it would be highly impolitic to lay out any further capital on the lands of the South Australian Company, unless the dues be reduced to at most 1-14th, and the same applies to the lands of Mr. Angus, while an immunity from calls is given on his 500 shares. They recommended that the present management in the colony be superseded, and every expense stayed, until they were in a position to work one of the sets by steam-power; and that the precise state of their colonial finances be instantly ascertained. Should the South Australian Company reduce their dues to 1-14th, they recommend a call of 1l. per share for the purchase of an engine to prosecute the Bremer sett; and should Mr. Angus surrender his exemption from calls, another call of 1l. per share for the prosecution of the Lynedoch Valley sett, should Capt. Phillips feel satisfied that it was worthy the outlay. The directors ex-

pressed their conviction that the company was in possession of two mining properties excelled only by two or three other mines in the colony, and regretted that deeper mining had not been originally adopted by steam-power, regardless of the shallow deposits, which, however, had been a very prevalent error in the colony. The only alternative to making a call would be to wind up the concern. The meeting was further adjourned to 29th March; and, in the meantime, the directors will endeavour to complete the negotiation with the South Australian Company.

We have received very important advices from Auckland, to the 28th October last, by which we learn that Mr. Taylor, on behalf of the North British Australasian Company, had purchased the mine and plant belonging to Messrs. Whitaker and Heale, for 5000l. In another column we insert a detailed report of the position and prospects of the Kaw-aw Mines, which, if properly managed, will now become a most valuable property, being freed from all disputes with neighbouring interests, besides the important addition just effected. Specimens of the ores have also arrived for the Great Exhibition.

At Linare, Wilson's shaft, sinking under the 45 fm. level, was down 9 fms. further, and the lode worth 3 tons per fm. The 55, west of San Antonio winze, is unproductive. The 45, east of Shaw's, has a lode 5 feet wide, giving 5 tons per fm. The engine-house was proceeding very favourably, and the smelting-house nearly roofed in. There was nothing particularly to notice in other parts of the mine. The total quantity of ore in stock was 724 tons.

At the Imperial Brazilian there had been but little work for the washing-house. Thomas's vein, in the 14 and 24 fm. levels, although producing only work for the stamps, was large and tolerably promising, and the whole producing stamps' work. The mine was generally in good course of working, and the sinking to another level was expected to proceed satisfactorily. The only quantity obtained from the washing-house was 1 lb. 6 ozs. 16 dwts., nor were there any appearances to give hope of better results. The new 12-head stamps were completed, with a wheel 25 feet diameter. 57½ lbs. of gold, value about 2500l., have been received per Teviot.

The return of produce from Cocoes and Cuiba at the National Brazilian Mines was, from 6th to 24th January, 9 mcs. 5 ozs. 0 dwts. 34 grs. The report is favourable, but very short.

At St. John del Rey the costs have been enormously high for the month of Dec., 6005l. 7s. 6d., reducing the profit to 1721l. 9s. 6d. This is accounted for, however, by the heavy expense of the new 24-head stamps, which will not again occur, and the absence of some large items in the cost-sheet, and increased produce, gives great hopes for future improvement. In fact, more brilliant results are expected from these stamps than have ever yet been obtained by the company. In the supply of stone there has been a great deficiency, as also a deterioration in quality—beginning the year most unpromisingly, but the hopes of a favourable change were by no means diminished.

At the Montreal Mining Company's fifth annual meeting, on the 19th Feb., it appeared that the Hon. James Ferrier having, at the request of the directors, accepted the office of president, he proceeded to England and engaged a captain, refiner, and three furnace men; he had also selected a gentleman of whose qualifications he had received a favourable report, and Mr. Tregoning had been engaged for five years, and had commenced his duties at the mines. Although the directors could not congratulate the stockholders on any very large returns from the mines during the year, they had the satisfaction to state that the works were in a position to turn to account the labour and expenditure of the previous three years, and they confidently hoped to reimburse the shareholders for their heavy outlay. With only two blast furnaces, one calciner, and a refinery furnace added during the winter, 45 tons of fine copper were manufactured, and ready for sale up to the time of opening the navigation. The washing apparatus was complete, and 12 out of 20 jigg machines attached to the engine, and which had been in constant work since July 1. The quantity of ore dressed from that date to the 10th Nov. last was 853 tons, since which about 200 tons per month had been cleared. In addition, there was other machinery for cleaning fine ore, about 150 tons expected to be produced during the summer, of a produce of 11 or 12 per cent.; this supply had not, however, been taken into account, leaving it to cover any deficiency which might by chance happen. Stamps would also be erected during the summer, which would probably produce from 40 to 50 tons of ore per month, during a period of eight months, and which was expected to average fully 12 per cent. of fine copper. The number of furnaces was completed, and capable of returning 8 tons of refined copper per week; they consisted of two calcining, three melting, two roasting, and one refinery furnace; and if the dressing department gained on the smelting, two additional melting, and one roasting furnace, would be added, which would produce 5 tons per week more, making 13 tons of fine copper per week. The nett proceeds of copper shipped to New York had been 98l. per ton.

The imports into the port of London of minerals, ores, and metals, in the week ending 13th of March, have been—

12 tons of sulphur from Malta
94 ditto ditto from Palermo
155 ditto ditto from Gibraltar
20 boxes refined sulphur from Malta
126 barrels of copper ore from Malaga
476 bags of ditto from Algou Bay
48 barrels zinc nails from Antwerp
82 ditto zinc from ditto
105 chests ditto from Ghent
3825 plates ditto from Hamburg
462 bars lead from Malaga
994 bars lead from Carthage
1204 bars ditto from Seville
45 casks litharge from Rotterdam
443 slabs tin from Calcutta
499 slabs ditto from Rotterdam
1356 slabs ditto from Shanghai
76 tons iron from Pongsmung
2 boxes files from ditto
186 casks nails from Antwerp
9 kegs specie from New York

Among the arrivals at Swansea have been—122 tons of copper ore from Bilbao; 808½ tons of copper ore, and 29 tons of precipitated copper, from Cuba; and 470 tons of copper from Coquimbo.

HULL, THURSDAY.—Messrs. T. W. Flint and Co. state that mining shares have been quiet, but are still taken for investment in small amounts.—Railways have been extensively bought during the week. The last day or two has brought a sharp reaction; there are, however, buyers at the decline for all the better kinds of stock.

THE GREAT COWARCH MINE.—Mr. Adam Murray, jun., has returned from his inspection of this mine, and makes his report to the committee this day. We are assured that it is highly satisfactory, and confirms fully all that has been stated as to the great capabilities and value of this property. The applications for shares have been so numerous, that the committee have been compelled to defer the allotment until the commencement of next week.

WHEAL OWLES (St. Just) is working very extensively; they have three pumping-engines and three steam-whirls at work, and are now putting on a steam-stamp, at a cost of 2500l., which they hope to pay for without a call.

SYDNEY GOLDFIELD.—A correspondent informs us that an improvement has taken place in this mine on Vivian's lode, where, in the 20 fm. level, they have found some good stones of yellow copper ore. This sett, which is intersected by Wheal Vor main lode, and by several other tin and copper lodes, holds out the most encouraging indications to the adventurers, to whom we wish every success.

TYWARTHAY.—There are several improvements in the prospects of these mines, amongst them a good course of ore, producing 3 tons per fathom in the 80 east from Bennett's shaft, and a very kindly lode in the 100 west, yielding 2 tons per fathom, and improving.

OLD WHEAL BASSET.—There is a capital branch of ore in the level driving west on the red lode, worth 20l. per fathom, and the cost of driving is only 2l. per fathom. The ground is favourable for sinking towards the flat lode, which is the next that will be cut. In the southern part of the ground a cross-cut from the shallow adit has just intersected a lode about 1 ft. wide, containing fine gossan and stones of very rich ore.

EAST WHEAL LEISURE.—The 10 fm. level west, on Taylor's lode, has improved, and will now yield 1 ton of ore per fm.; the same level west, on the middle lode, also yields 1 ton per fm.; there is every appearance of further improvement. On the north lode, some good tribute ground has been opened by driving the 17 east from engine-shaft, and a rise from this to the 10 will give some very good pitches. In the western part of the mine there is a good deal of ground in the 17 and 7 fm. levels, which will also work tribute.

QUICKSILVER.—The last price of quicksilver at San Francisco was \$15 to \$15½; Valparaiso, \$120 per quintal; London, 3s. 9d. per lb. The produce of California is now reported at 9000 lbs., or 1080 quintals per annum, a quantity insufficient materially to increase the yield of silver or to affect the market. An arrangement is said to have been made by the house of Messrs. Rothschild at San Francisco, with the proprietors of New Almaden, in virtue of which the price of quicksilver will be kept up, and the consequence is that quicksilver has risen in Guanajuato, Peru, and Valparaiso. In the end of the year the price fell, as it was believed Californian quicksilver would compete with the Spanish.

MINERS' TESTIMONIAL TO MR. JAMES MATHER, SOUTH SHIELDS.—A public meeting was convened for this day (Saturday) by the miners and their friends, to be held in the Lecture Room, Newcastle, to present this gentleman with a silver cup, as a mark of esteem and gratitude for the very valuable and humane services rendered by him to secure a more healthy and safe ventilation of the mines of this country.

CHEMICAL ANALYSIS, &c.—ANALYSIS AND ASSAYS, or INVESTIGATIONS OF ANY KIND, are UNDERTAKEN at the COLLEGE OF CHEMISTRY, LIVERPOOL.

Professor—Dr. SHERIDAN MURPHY, F.R.S.E.
Hon. Assistant—Mr. JOSEPH DANNON, F.C.S.
A list of Fees for Analysis, and for Students Working in the Laboratory, may be obtained by writing to Dr. Muspratt, College of Chemistry, Liverpool.

CURIOUS DISCOVERY OF ANCIENT CALAMINE WORKS.—The Baden journals announce the discovery of most extensive and ancient calamine mining works in the neighbourhood of Orislach. According to the statements made, no record exists of these mines having been known or heard of, but from appearances they are ascribed to the labours of the Romans. The galleries are said to be in good order, and to contain a store of nearly a million of centers of calamine ore, which, on an average, is valued at 6s. the cwt. This, if true, is an interesting as well as most profitable discovery. But the assertion must be received with all due caution.

SILVER-LEAD ORE

Sold at Aberystwyth, on the 17th March.

Mines.	Tons.	Price per Ton.	Purchasers.
Goginan	50	£15 7 0	Walker, Parker, & Co.
ditto	30	15 15 0	ditto
Frongoch	40	11 9 6	Michell & Son.
ditto	40	11 9 6	Penpoll Smelting Co.
Cwystwith	60	11 5 0	Panther Smelting Co.
Nantes	60	10 15 6	Sims, Williams, & Co.

Sold at Liskeard, on the 18th of March.

Wheal Trelawny	100	£22 12 0	Pontifex and Wood.
ditto	40	16 0	Locke, Blackett, & Co.
Herodsfoot	80	12 15 0	Pontifex & Co.

COPPER ORES.

Sampled February 26, and Sold at Swansea, March 18, 1851.

Mines.	Tons.	Prod.	Price.	Mines.	Tons.	Prod.	Price.
Cobre	77	17½	£12 12 0	Burra Burra	56	36½	£28 13 0
ditto	76	24½	18 14 0	ditto	54	36½	28 9 6
ditto	68	2	18 17 0	Berehaven	10½	11½	8 9 6
ditto	63	24½	18 0	German Ore	45	7	5 0 6
ditto	53	24½	18 12 0	ditto	17	16½	12 9 6
ditto	29	17½	13 1 0	ditto	16	12	9 3 6
ditto	18	18½	13 11 0	ditto	3	17½	13 9 0
Burra Burra	60	37½	28 18 0	ditto	2	8½	6 2 0
ditto	59	36½	28 7 6	South Australian	48	24½	18 11 0
ditto	58	34	26 13 6	Ballynoe	37	72	5 6 0
ditto	57	36½	27 17 6	Spanish	7	10½	8 0 0

TOTAL PRODUCE.

Cobre	384	£6415 7 0	South Australian	48	£890 8 0
Burra Burra	344	9661 18 0	Ballynoe	37	196 2 0
Berehaven	105	889 17 0	Spanish	7	56 0 0
German Ore	83	637 2 6			

COMPANIES BY WHOM THE ORES WERE PURCHASED.

English Copper Company	Tons.	Amount.
Freeman and Co.	160	£2898 18 3
Grenfell and Sons	70	1190 0 0
Vivian and Sons	193	3575 11 0
Williams, Foster, and Co.	320	4667 15 0
Schneider and Co.	117	3842 2 9
Mason and Elkington	132	3025 12 0
Total	1008	£18,746 15 0

Copper Ores for Sale April 1.—Cobre 75, 66, 62, 58, 57, 56, 55, 50, 8, 113, 107, 96, 93—Berehaven 121, 116, 103, 93, 77—Knocknabon 120, 104, 101, 79, 26, 24—Kapunda 58, 47, 38, 29—Waterloo Slag 60, 25—Aberdovey 35—Tigroney 3—Cronebane 3.—Total, 2164 tons (21-cwts.)

AVERAGES.

	Produce.	Price.	Standard.
British	10 3-16.....	£ 7 13 0	£96 19 0
Foreign	26½.....	20 7 6	84 19 0
			<hr/>
Sale	24½	£18 12 0	£85 13 6
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Totals—British 142; Foreign, 866 = 1008 tons (21-cwts.)			

AVERAGES OF LAST SALE.

	Produce.	Price.	Standard.
British	6½.....	£ 4 9 0	£101 19 0
Foreign	17½.....	13 3 6	86 13 6
Sale	17½	£12 12 0	£87 1 0
Totals—British, 85; Foreign, 1196 = 1281 tons (21 cwts.)			

BLACK TIN

Mines.	Tons.	Price per Ton.	Purchasers.
Plymouth Wheal Yeoland	1½	£52 10 0	Calenick Company.
ditto	1½	52 10 0	Williams & Co.
Tincroft	10	45 2 6	Union Smelting Co.
ditto	2	30 0 0	ditto
ditto	5	45 2 6	Daubuz.
ditto	5	45 2 6	Williams & Co.
ditto	1	30 0 0	ditto
ditto	1	30 0 0	Daubuz.

COPPER ORES.

Sampled March 5, and Sold at the Royal Hotel, Truro, March 20.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
Devon Gt. Cons.	101	£6 13 6	Wh. Anna Maria	66	£6 15 6
Wh. Josiah	96	5 16 6	ditto	46	7 9 6
ditto	93	4 15 0	West Caradon	90	6 0 6
ditto	88	6 0 0	ditto	81	9 8 6
ditto	83	4 17 0	ditto	60	6 10 6
ditto	82	4 19 0	ditto	38	4 3 6
ditto	78	7 2 0	Fowey Consols	93	6 16 0
ditto	75	6 4 0	ditto	71	6 14 0
ditto	73	7 15 6	ditto	56	4 16 0
ditto	62	4 19 0	Wheal Friendship	95	6 17 0
ditto	60	5 6 6	ditto	93	6 11 0
ditto	59	6 4 0	Leedford United	141	6 8 6
ditto	44	5 13 6	Foldice	41	4 18 0
Wh. Fanny	85	5 10 6	ditto	41	4 6 0
ditto	76	5 1 0	ditto	34	3 18 6
ditto	65	5 4 6	Wheal Maiden	17	5 14 6
ditto	58	5 18 6	ditto	6	3 16 0
ditto	40	5 6 6	Wheal Jewel	22	3 14 0
Wh. Maria	53	7 2 0	Davey's Ore	1	5 10 6
ditto	35	9 15 0			

TOTAL PRODUCE.

Wheal Friendship	188	£1259 18 0
Bedford United	141	905 18 6
Foldice	125	554 15 6
Wheal Maiden	23	120 2 6
Wheal Jewel	22	81 8 0

NOTICES TO CORRESPONDENTS.

"J. S." (Walker Iron-Works, Newcastle).—Native nickel has been found only in the mine "Adolphi," at Johannegeestadt, in Saxony; and at Joachimsthal, in Bohemia, and is nearly pure. The ores of nickel are copper nickel, black nickel ore, and nickel oxide, found also at the above mines, and also at Wlenlockhead and Leadhills, in England; at Alva, in Strathgairn; in the Harz, in Germany; and in Allentown, in France. They are composed of lead and arsenic. There is also nickel in native iron, sulphide of nickel, antimonial nickel, nickel glance, and a plumb-nickeliferous black copper, while most of the cobalt, and some lead ores, contain this metal. We are not able to state the price of these ores at wholesale rates, nor where the metal is principally manufactured in England, but the price of the metal charged by London chemists is from 6s. to 7s. per lb.

"J. D." (Liverpool).—The particulars shall be obtained, and forwarded.

"A Constant Reader" (Liverpool).—Wheel Tom is divided into 2000 shares, of 5s. each: the mine is situated at the foot of Kitt-hill, Stoke Climsland. A report on the sale, by Mr. Arthur Dean, C.E., appears in another column.

"A Young Miner" (Saint Just) should obtain—"Budget's Miners' Guide;" Mitchell's "Manual of Practical Assaying;" and our "Glossary of English and Foreign Mining and Smelting Terms." Mr. Wesle, of Holborn, will furnish a catalogue, from which a selection of other works can be made.

"T. W."—The Cost-book System is not recognised by the common law, out of the county of Cornwall, where it can solely be administered under the judicial government of the Statutory laws. Several mining companies have started lately on the principle of raising a large capital at once, to preclude the necessity of calls, but we cannot subscribe to the advantages which some have claimed for the plan. In the present case the proposed capital is 24,000l., while it is stated that there is ore in sight sufficient to warrant the settling pitches as soon as the operations are commenced; and, under such circumstances, we cannot see the necessity of taking more money from the shareholders than is necessary for the purchase, and a few months' working. The purchase-money required by the lessor for the soil, ores at surface (about 200 tons), buildings, machinery, &c., is 3000l., and 3000 shares, equal to 9000l. Under the Cost-book System, it is understood that a complete settlement of debts, or division of profits, takes place every two, or at most three, months.

"N. W." (Bristol).—The office of the Tremar Copper Mine is 3, Castle-terrace, Exeter—Mr. John Jury, the purser, will answer any inquiry for particulars.

A correspondent ("A. M.") Leith makes the following inquiries, which, probably, some of our readers, practically acquainted with smelting-works at Swansea, or elsewhere, will be kind enough to answer as nearly correct as such information can be obtained:—1. The probable quantity of brassfounders' furnace ashes, used as slag at the smelting-furnaces of Swansea or Wales, annually?—2. A feasible approximation to their average annual value?—3. Their use, highest value per ton, and mode of treatment?—4. The period, or date, when this commodity became an article of trade?—5. The probable quantity of lead ashes, or dross, produced in this country in a year?—with any further information connected with such matters.

"An Enquirer" (Norwich) should address his letter to a local newspaper—the subject would not be interesting to our readers.

A letter addressed to "Argus," and forwarded to our office, will reach him.

"N." (Reading).—The principal sources of error apparent from hand polishing are, the absence of exact control in regulating the lengths and directions of the strokes, irregular increase of temperature in the specimen and polisher, unavoidably caused by the friction, and also the unequal pressure of the hand. All these difficulties rapidly increase with an enlargement of size, and a specimen of 6 or 8 inches diameter is, perhaps, as large as can, with the utmost care, be produced by hand with the required accuracy. Larger specula have occasionally been polished by hand; but in the majority of instances it has ultimately proved that the increased incorrectness of defining power has, to a considerable extent, counterbalanced the advantages derived from an increase of diameter.

"A Novice" (Brighton) should obtain our "Glossary," where he will find the terms explained. He must apply for the other information to a broker.

Capt. Matthew Francis, on his "Improvement in Silice Dressing," shall appear in next week's Journal.

"J. S." (Whitehaven).—We have noticed at various periods the experiments on iron by Mr. Fairbairn, but never gave the tables, they generally being too complex, and extracts would mutilate the deductions arrived at. The report of the Select Committee of the House of Lords, appointed in 1837, and published about January, on the strength of iron for railway purposes, contains a vast amount of information and evidence on the subject, among which, we believe, will be found Mr. Fairbairn's account of the results of his experiments. We have, however, forwarded a copy of the *Mining Journal*, Dec. 9, 1848, containing an interesting paper by Dr. Buchanan on the subject.

T. H. Poole (Dorsetshire).—The best method of treating such springs as our correspondent describes is, after having formed the steel to the necessary shape, heat it to a dull red heat, and plunge into pure tallow; one operation will harden and temper the steel sufficient for all ordinary purposes.

"K." (Loughborough).—Some delay must necessarily arise—among other causes, the preliminary arrangements may not have been perfected; but write to ascertain the reason. We have published an excellent "Glossary of English and Foreign Mining and Smelting Terms," which can be procured through any bookseller or news agent, price 2s.

We have received a communication from Messrs. Josiah Sims and Co., share-brokers, Tavistock, cautioning our readers against any transactions with a Mr. George Haswell, of London, in mining matters, he having acted in the following disgraceful manner towards them, respecting shares in Wheel Tremar:—On the 11th inst., he sent a usually filled in printed form, requesting the allotment of 50 shares, on which he promised to accept the transfer, and pay the deposit of 1l. per share thereon, the document being duly signed "George Haswell." Messrs. Sims obtained 50 shares for him; but he returned the transfer unaccepted, stating he had invested his money in Woodman's Well and Broadridge Console shares. They again wrote him, demanding their commission, but the letter was returned indorsed "Done by bus to California." The whole proceeding assumes the character of a dirty and dishonest trick, and we caution our readers against having anything to do with such a person.

SOUTH CARN BARRA.—"C. B." (Hull) writes—"Is this mine a *bona fide* undertaking, in respectable hands, and in full work? Your reply in the next Journal will oblige."—[As we have had several similar inquiries, perhaps some one connected with the company will forward the necessary information, in reply to our correspondents.]

"Javor" (Lelant).—Our correspondent had better apply to Mr. Button, Holborn-hill, describing the uses to which the battery is to be applied, and the power required, who will furnish every information, and state the price.

We have received Mr. Rowlandson's report to the Governor and Company of the New River on the schemes of the Hon. Mr. Napier and the General Board of Health, for supplying London with water; but too late to do it justice in our present Number. It shall be noticed in our next.

"We must impress upon our correspondents, the necessity of invariably furnishing us with their names and addresses—not that their communications should, consequently, be noticed, but as an earnest to us of their good faith.

"It is particularly requested that all communications may be addressed—

TO THE EDITOR,

Mining Journal Office,

26, FLEET-STREET, LONDON.

And Post-office orders made payable to Wm. Salmon Mansell, as acting for the proprietors.

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, MARCH 22, 1851.

The MINING JOURNAL is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all newsagents, at the Royal Exchange, and other parts of London.

The arrivals at the building in Hyde Park have within the last fortnight been exceedingly numerous, but it is somewhat difficult, from the confusion which necessarily prevails until the preliminary arrangements of distribution are completed, to give anything like a general and really correct idea of the value of the contributions to the collection of specimens of human industry which have relation to the mineral kingdom. From sources of information peculiarly our own, we were enabled, however, in our last Number, to lay before our readers a catalogue of minerals to be exhibited, with the names of the exhibitors. The list was by no means perfect, but it fairly represents a large section of Class 1, which includes mining and metallurgy. The superintendence of this class is divided between two gentlemen, esteemed correspondents of the MINING JOURNAL—Part 1, mining, metalliferous minerals, and metallurgy, to Mr. ROBERT HUNT, Keeper of Mining Records; and Part 2, to Prof. ANSTED—Earthy minerals, coal, building stone, &c.

We learn that, owing to the neglect of the exhibitors themselves, who have, doubtless, imagined the catalogue forms to be much less important than they really are, numerous articles will be very imperfectly described in the catalogue, and in some cases it is feared even their names omitted—the whole having been classed under one head as the contributions of local committees. Thursday last, the 20th inst., was, however, the latest day for correcting these errors, and we hope many have availed themselves of the time extended for that purpose. In addition to our catalogue of last week the following are in the Exhibition:—

Ore Dressing Machine, Cornwall—Branton.
Machine for Preventing Accidents in Mines, by breaking of Ropes or Chains—Fourdrinier.
and the series of iron ores, from Mr. Blackwell, of Dudley, inserted last week, are from every district throughout the United Kingdom.

The American contributions, brought by the *St. Lawrence*, which arrived off Cowes last week, are comprised in 700 packages, weighing between 200 and 300 tons. Among the minerals is a fine specimen of almost pure copper from Lake Superior, weighing 2544 lbs., also a fine specimen of iron ore; but the greatest curiosity is the immense block of zinc ore, before alluded to in our columns, weighing about 8 tons, which took 70 men half-an-hour to raise it from the hold and land it on the quay. This was a curious sight—the tramping of 52 men round the capstan, the shrill music of the marine fife, the creaking of the tackle, the hoarse

howlings, and the sound of the silver whistles of the boatswain and his mates in giving orders, while the gigantic mass was imperceptibly rising from the hold, and unutterably striking. The gigantic specimen came from New Jersey, and is nearly a cube, of about 4 feet each way. There are specimens of all kinds of minerals and metals, and a series of ores illustrating a map of Virginia. There are also specimens of all kinds of machinery—lathes, planing, drilling, boring, and weighing machines; agricultural implements, life-boats, buoys, and anchors. There is also an air-exhausted hermetically-sealed coffin, in which a human corpse might be preserved uncorrupted for ages. It contains a bouquet of flowers as fresh as the day they were gathered. The whole of the American packages have, before the publication of this Number, been weighed and sealed by the Custom-house officers, and dispatched to London.

It is our painful duty, in this day's impression, to record several fatal accidents, terminating in a wholesale destruction of human life, the principal of which has been a coal-pit explosion in Scotland, most deplorable in its results, 61 human beings having been instantaneously hurried into eternity; and a steam-boiler explosion at Stockport, by which 19 persons have met with an untimely end, and an immense amount of property destroyed, and another at Johnstone, in Scotland, at a cost of seven lives. Another coal-pit explosion has also occurred at Ashton, by which two lives have been sacrificed; but this latter was occasioned solely by the recklessness of one of the survivors, who took the top from his lamp, in spite of a regulation to the contrary, and of whom, it is to be hoped, a severe example will be made—apparently the only means of bringing the men seriously to think of the perilous and delicately dangerous position in which they place themselves, and the lives of their comrades, when they carelessly neglect the most common precautions against the known casualties of the coal mine. The catastrophe at Nithhill, near Paisley, is of a most lamentable character, and has caused an immense excitement in the district—it being the most disastrous of any explosion which ever occurred in Scotland, and nothing of a very serious nature has happened there since the destruction at the Campbell pit in 1805, when 25 persons were killed. This dreadful occurrence naturally leads us to the subject of the Act, for giving power to the SECRETARY OF STATE to appoint inspectors, to the inefficiency of the law for all useful purposes, and to the apathy shown in not appointing a sufficient number for each coal district in the kingdom, to enable proper investigations to be made. We believe no inspector has yet been appointed in Scotland at all, and a communication on the subject appears in another column; yet we are told that, notwithstanding the great attention paid to the ventilation of this colliery, which was so good that in the most dangerous part naked candles have, up to the time of the accident, been safely employed; if the passage of the air currents are disordered for an hour, so fiery is it, that in that brief period enough carburetted hydrogen would be liberated to destroy, if exploded, the whole of the brattices and stoppings over the entire 70 acres of its workings. We must suppose that no inspector of practical experience could have sanctioned the risk of naked candles in a mine where the slightest casualty would occasion such wholesale destruction, and in which, doubtless, a sudden eruption of large quantities of fire-damp has been the deplorable cause. In Scotland there is no coroner's inquest, and as there are only two survivors, who know little about the occurrence more than that they found themselves victims to it, it is more than probable that no further light will ever be thrown upon the subject. It should, however, prove a great moral lesson to those who have the responsibility of carrying the provisions of the Act into operation; and although we acknowledge it does not go far enough—only assuming something like an offence, and inflicting no penalties for its commission—the mere appointment of a sufficient number of proper and efficient inspectors, acting on the powers given them in the Act, would go far to render these catastrophes less frequent, and less horrible in their results.

The boiler explosion at Stockport embraces another sort of inquiry, yet one of as important and responsible a character, as relates to the party who supplied the boiler; and if, as stated, only three or four stays were inserted in a boiler of such size and description, and the only one under the furnace bars was neglected to have been bolted to the outer cylinder (should the evidence prove such to have been the case), we cannot see how any jury could bring in any other verdict than that of "Manslaughter" against the party who supplied it. As, however, the inquiry is in progress, we will not prejudice or prejudice the case by any further remarks, reserving them, should they be applicable, for another opportunity.

A cause of some importance to joint-stock shareholders has been decided in the Court of Session, Edinburgh, in which the Edinburgh and Glasgow Bank sought to recover from DAVID EWAN and others, partners in the Royal Bank of Australia, payment for debentures held by them. It appeared that the Royal Bank of Australia was established in 1840; it was not incorporated, nor had it a registered officer, in whose name it could sue and be sued. The action was brought in 1849 against all the shareholders, and the defence set up was that the action was incompetent, because the debt sued for had not been constituted against the company—that all parties interested had not been summoned, and that the action was not laid with sufficient distinctness and precision. Lord IVORY, in Dec. last, gave judgment, dismissing the plaintiff's case with costs; and on appeal to the Inner House, a case for counsel's opinion as to the English law on the subject was submitted to Messrs. G. J. TURNER, of the Chancery bar, and HUGH HILL, of the common law, who have given the following opinion:—That an action could not be brought in the courts in England against the company under the title of the Royal Bank of Australia, it being a well established rule that, unless the mode of proceeding be regulated by charter or statute, the action must be brought against individual partners by their proper Christian and surnames—that those parties only are liable who were partners at the time the debts were incurred, and each partner is liable for the whole amount of the debts. If judgment be obtained against any individual partners, the partnership property can only be taken in execution to an amount equal to the proportion of shares held by such defendant. If all the partners are defendants, and judgment be obtained against them, the partnership property may be taken in execution, under a writ against the partners. The partners may appear voluntarily, but cannot be compelled, the only course being outlawry against those who are out of jurisdiction. The Court eventually rejected the preliminary defences, the LORD ORDINARY's interlocutor was remitted, and the case was to be proceeded further with as might be considered just, reserving the plaintiff's claim for costs for future decision.

At the Staffordshire Assizes, a case came on for trial before Mr. Justice PATTERSON, which, although the party escaped through a variance in the evidence and the indictment, will, we trust, act as a wholesome caution to all persons having the care of mine engines, or otherwise connecting themselves with raising and lowering miners. PAUL WHITEHOUSE was indicted for the manslaughter of JOSEPH ROWLEY, ISAAC MILLS, and JOHN SMITH, and the case, which appeared in the MINING JOURNAL of the 2d Nov. last, was as follows:—The prisoner had been told by the banksman that there were no more persons to be drawn up, when he removed the signal bell from the engine-house, and was preparing to leave. The banksman then told him there were three more waiting to be drawn up, and with an oath he impatiently exclaimed—"Oh, there's always something to be done at this pit," and setting the engine rapidly to work, the skip was drawn over the pulley. Two jumped out, and fell down the shaft, and the third was jammed against the roller, and never recovered the injuries he received. It was alleged for the defence that the usual signal of "mind" was not given by the men in the skip until within about 7 yards of the top, instead of 30 yards, and when the engine was stopped it was too late to avert the catastrophe. Mr. KETTEL, for the prisoner, objected that there was a fatal variance between the evidence and the indictment. The latter charged the negligence to have taken place "whilst the said persons were going, to his knowledge, in the said skip, and ascending in the shaft of said pit;" whereas the evidence proved that the casualty happened after the skip had left the shaft. The Judge considered the objections good,

and having consulted Mr. Justice TALFOURD, who entirely concurred, the prisoner was acquitted. Mr. Justice PATTERSON, in ordering him to be discharged, said it appeared to him that the prisoner, who was a well-conducted man, understood his duty, and had performed it seven years without accident, was not alone to blame, and the evidence induced him to make this public observation. He sincerely hoped that mineowners, taking into consideration the many accidents of this kind which occurred, would take the opinion of engineers, and see whether a system could not be adopted which would put it out of the power of negligent men to occasion such accidents. It appeared to him that where there was an engine, it would be the most simple thing in the world to have connected such apparatus as would prevent such accidents. He must say, seeing they reaped the benefit of the miners' labour, they ought to do it, and he hoped they would immediately direct their attention to the subject.

PNEUMATIC RAILWAY PROPULSION.

We have received a reply from Mr. Weston to the objections raised by Mr. Brunel to his novo-motive plan of railway traction, inserted in our Notices to Correspondents on the 8th inst. The writer expresses himself obliged to our correspondent for calling attention to the subject, as he thinks it probable more importance may have been attached to these objections than, on investigation, they will appear entitled to. Mr. Weston's statement of the interview with the directors and Mr. Brunel is substantially as we have given it, and to that gentleman's first objection, a loss of 50 per cent., it is replied that the supply of air to the fore end of the tube, as it advanced in front of the pistons, would not be continued until the whole length of tube had passed over them, but would be cut off at two-thirds or one-half of the stroke, as it were, of the traction pipe, by which the loss of power pointed out would be avoided—as, for instance, in an engine worked by atmospheric pressure, discharging its air into a vacuum reservoir when half a vacuum was maintained, was made to cut off the supply of air to the cylinder at half stroke, it would give out the same force in the act of expansion in the engine as it would take to compress it again in the cylinder of the air-pump, and there would be no loss of power from the cause stated. He thinks Mr. Brunel misunderstood his explanation, and fancied the drivers would have to guess at the time, and cut off the supply of air by hand; whereas the operation is perfectly self-acting, at any moment when the driver wills it. It is admitted that there is a loss of power probably one-third, or, on a close estimate, not more than 28 per cent.; but Mr. Weston is quite willing to take even 50 per cent. as a loss, and even then prove its superior economy over every other system of railway propulsion.

To the second and third objections, "that the valves of the tube would not have time to be raised out of it while passing the pistons, but would be dashed to pieces, and that the sudden knocking open of the tube, without time for the wedge principle to act, must be destructive, and that neither the tube or pistons could stand the concussions even at moderate velocities," Mr. Weston replies merely by stating it to be an absurdity too great to be ascertained by Mr. Brunel, or any one else, having a knowledge of the laws which apply to matter in motion. It is assumed that a valve, weighing only about 25 lbs., could easily be lifted 15 or 16 in. in a second, because it would fall through as many feet in the time by the force of gravitation, and because a railway train runs from a level on to an incline with perfect ease, instead of burying itself in the bowels of the earth—neither of which similes we take exactly to meet the difficulty of the case. The last objection, particularly, Mr. Weston considers a hastily-formed opinion, quite opposed to reason, and daily and hourly experience; and believes that, on consideration, Mr. Brunel would not be inclined to support his views, made without due consideration and reflection, as to the working of this mode of railway transit. We must leave these explanations—the gist of Mr. Weston's communication—to the acumen of our scientific readers, who must form their own opinions as to the conclusiveness of Mr. Brunel's objections, and whether they are successfully met by the above explanation.

ELECTRO-MAGNETISM AS A MOTIVE-POWER.—It is with much satisfaction we find that Mr. Horth, whose electro-magnetic arrangements for obtaining motive-power we have often noticed, has lately by no means been idle, although we have not heard from him. His engine formerly required four powerful magnets to produce a double stroke, but he has succeeded in constructing a model of an engine, which by one hollow magnet produces the same results, and which can be extended in diameter according to the required power, the pull or attraction being expressed in pounds per square inch of the area of the piston. It is also arranged so that the destructive effect of the sparks is avoided, and also, at the same time, the re-action from the retarding induced currents. The particulars arrived too late for insertion this week, but shall be fully described in our next Number.

IMPROVEMENTS IN STEAM-ENGINES.—A patent has lately been obtained by Mr. E. Lloyd, of North Wales, for improvements in the construction of steam-engines, whereby a considerable saving can be effected, and extra power acquired. The double-cylinder engine, with Mr. Lloyd's simple valve motion, may be considered of the highest importance for railways, there being a great want of correct expansive engines. The benefit to be derived from double cylinders is proved by the opposing engineers themselves now advocating those means for expansion which they had heretofore condemned. The link motion at present in use does not, as we believe, act correctly, and gives only an uncertain expansion; the principle, however, is so good, that this link motion is generally used. Now, the improvement of Mr. Lloyd is that of making an engine act correct, expansively, under the full control of the engineer. The engineer, we can very well understand, is apt too generally to oppose steps taken in advance by others, who may not have been educated, or brought up to the profession; yet it must not be said that mechanical ideas are confined to a few, while many unknown, and comparatively uneducated, may be found to be the most fitting persons to carry out, in practice, measures which require the appliance of science and practical ability. We understand the engine will be at the Exhibition, and shall gladly avail ourselves of an early opportunity of further noticing the patent to which we have referred.

WATER-WORKS IN AMSTERDAM.—It will be seen by an advertisement in our Journal of to-day, that such a project has not only been entertained, but that it has the support of home and continental houses likely to advance its objects. The capital, it must be acknowledged, is somewhat startling—being 500,000l., divided into 25,000 shares of 20 florins, or 20l. each; the deposit being 12 florins, or 1l. per share. A board of directors has been constituted—of which eight of the number are "home" directors; the others being at Amsterdam, in accordance with the Dutch law, *Société anonyme*, which limits the risk of the shareholder. It is proposed to furnish Amsterdam, having a population of 200,000 persons, with a regular and abundant supply of water. The Government has, we find, in a letter from the Minister of the Interior, consented to grant the privilege in perpetuity to "supply the capital and suburbs with water from the river Lek and its tributary streams"—a concession which in effect amounts to a monopoly, the supply of Amsterdam from those sources having been conceded exclusively to this company. It appears from the prospectus that, after a dividend of 6 per cent., has been paid to the proprietors, that seven-eighths of the surplus profits shall be divided amongst them—the remaining one-eighth being applied as the statutes may direct. Of the capital, which consists of 25,000 shares, two-fifths are reserved for Holland and the continent—7000 having been already subscribed for, and thus leaving 8000 for appropriation. The importance to be attached to the supply of water to so vast a population as that of Amsterdam, will naturally force itself upon the attention of the capitalist; and we cannot for a moment doubt but the entirety of the shares will at once be taken up. In a report, from Mr. J. Simpson, C.E., he observes—"With regard to the commercial prospects of a scheme of this kind, I am of opinion that there cannot be a reasonable doubt that the undertaking will be highly remunerative, even while affording an immense reduction upon the present prices of water;" and, again, "that supposing the charges for water to be only about one-fourth of the maximum allowed by the concession, it will be seen that a dividend of 20 per cent. will be obtained." The view entertained by Mr. Simpson, in reading through the report, we find is that of constructing works on a scale of sufficient magnitude to supply in the summer months 4,000,000 imperial gallons, or about 18,000 cubic metres daily; while the concession appears only to stipulate for 4000 cubic metres—a quantity which, in the opinion of that gentleman, would prove insufficient. To use Mr. Simpson's words, "The average quantity to be supplied and paid for at 3,000,000 gallons daily, for 312 days in the year, at 2s. per 1000 gallons, is about one-fourth of the maximum price, the annual income would amount to 98,600l., from which deduct the assumed cost of 22,620l.; thus leaving a net annual income of 70,980l., or 20 per cent., on the capital required of 350,000l."

COAL FOR THE EXHIBITION.—An enormous piece of coal has just been raised from the coal mines belonging to the Tredegar Iron Company, Monmouthshire. This "black diamond," which measures 18 ft. long, 5 ft. broad, 4 ft. high, and weighs about 12 tons, is one of the largest pieces of coal ever got out of a pit in this part of the country.

RESTORMEL MINES (Lostwithiel).—There have been shipped from this mine for the Great Exhibition two lumps of iron ore, weighing respectively 18 cwt. and 12 cwt., so rich and solid, that no one would imagine from their small appearance they were half that weight. The Restormel Mine, where these were taken, is that into which the Queen entered, to the depth of 300 fathoms,

LECTURES ON MINERALOGY.—No. XIV.

Prof. TENNANT, in a lecture at King's College, directed the attention of the students more particularly to metallic minerals. There was in the mineral kingdom a large class of bodies known generally as metallic substances, but which differed very considerably in all their distinctive properties. He had arranged them according to their specific gravity in the following order:—

Platina	Uranium	Osmium
Gold	Copper	Manganese
Iridium	Cadmium	Antimony
Tungsten	Cobalt	Tellurium
Mercury	Nickel	Titanium
Palladium	Iron	Arsenic
Rhodium	Molybdenum	Chromium
Lead	Tin	Cerium
Silver	Columbium	Vanadium
Bismuth	Zinc	

These were found almost exclusively in the earth, although there were a few found also in vegetable and animal substances—as, for instance, in the blood there was a portion of iron, but in such minute quantities as scarcely to be detected by the most accurate analysis. Several metals were also found in a pure state, or uncombined with earths or other substances, as palladium, iridium, gold, mercury, silver, copper, &c.; when they were thus found they were called “native” or “virgin.” In looking over old collections and old works on this subject, the students would find that the metals were described by planetary and other symbols. A similar plan was adopted by Berzelius, and the older specimens in the British Museum all had these expressive ancient symbols. He regretted they were not continued, and placed upon the labels by the side of the more modern and more scientific mode of description. These symbols had such a beautiful simplicity, and were so easily acquired, that they would assist the student most materially. Taking, then, Phillips' arrangement, this class would include not only such metals as were found pure, or nearly pure, in their native state, but those variously combined with other substances forming metallic ores, or with other metals, with sulphur, and with oxygen, or in the state of oxides, mineralised by acids. Phillips began, as he said, with the iron, as the oldest and most universally diffused of the metals; but it did not follow that because iron was the most plentiful, it was the oldest; and, indeed, the contrary was, perhaps, nearer the fact, inasmuch as it underwent such a vast number of changes. For instance, the moment it was exposed to the atmosphere, although it might be polished, it absorbed the oxygen, became rusty, and was converted into the oxide of iron. In many of its forms, if washed with water, decomposition was greatly facilitated, and a sulphuret became a sulphate. Pliny gave a very long description of iron. He said “every person knows the manifold uses of this truly precious metal. It is capable of being cast into moulds of any form—of being drawn out into wires of any desired strength or fineness—of being extended into plates or sheets—of being bent in every direction—of being sharpened, hardened, and softened at pleasure. Iron accommodates itself to all our wants, our desires, and even our caprices. It is equally servicable to the arts, the sciences, agriculture, and war.” Ure, in his dictionary, adds that the same ore furnishes the sword, the ploughshare, the scythe, the pruning hook, the needle, the graver, the spring of a watch or of a carriage, the chisel, the chain, the anchor, the compass, the cannon, and the bomb. Had Pliny seen our locomotives, our railroads, our iron steamers and ships, our bridges, throwing their iron arches over wide and rapid rivers, or suspended in mid air like a fairy structure, or that last and most wonderful triumph of science, the tubular bridge across the Menai Straits, raised by machinery more powerful than the thews and sinews of the Titans of old, the beautiful columns of iron which support our palaces, that great naturalist would indeed have found a subject worthy of his genius. Iron was the most important substance found in these realms. It was more valuable to us than the gold mines of California. For the last seven or eight years we had manufactured two millions of tons annually. Its cost varied considerably, and sometimes it afforded the manufacturer a very considerable profit.

The tenacity of iron was one of its most valuable qualities, and it was one of the best known substances for suspending weights. An iron wire of a given thickness would support a weight of 56 lbs., while a copper wire (which was the next in tenacity), of the same diameter, would only support 32 lbs., silver 20 lbs., gold 16 lbs., and lead 3 lbs.

Iron was found in those extraordinary masses called meteoric stones. In the British Museum there was a very large and beautiful collection of these substances. In the first and second cases were nothing but native and meteoric iron, most of which were of undoubted origin. There were, however, several of somewhat questionable authenticity; but their composition bore so strong an analogy to the others as to justify their being so placed. There was a very large specimen at the end of the room, not in a case, brought from South America, composed of iron and nickel, presented by Sir Woodbine Parish. When these minerals had nickel in any quantity in their composition they continued free from rust. It might be observed that the names of the localities in which these specimens were found were frequently printed upon their surface. This was done by the action of muriatic acid. There were many other specimens in this country, and those of the East Indian Company, the Geological Society, and the Royal Institution, were well worthy of a visit. Berzelius had analysed a large number of these specimens, and he found them generally to contain 93 to 96 per cent. of iron, 3 to 6 of nickel, and a small quantity of cobalt. In some small portions of sulphur were found. A most interesting account of aerolites was to be found in Humboldt's *Cosmos*.

The most abundant of the iron ores was the sulphuret, or the common iron pyrites. This oftentimes had a shining yellow appearance, and was not unfrequently mistaken by the ignorant for gold. Prof. Tennant then exhibited a great variety of beautiful specimens, and remarked that he believed most of our mineralogists had been made by such shining specimens. A pretty showy one would be picked up, and carried home, and the next thing was to know something of its history. In ancient times this substance was used for the purpose of eliciting sparks from steel, and in many of the ancient firearms preserved in the Tower, at Woolwich, and elsewhere, the locks still contained pieces of iron pyrites, which, when brought into contact with a file, produced a shower of sparks. The mineral, in fact, took its name from this property, pyrites meaning firestones. These were superseded by flints, which in their turn had given place to the percussion cap. Iron pyrites was frequently found crystallised in well-defined cubes, and the surface had a characteristic peculiarity which distinguished it from other minerals. Each face of the cube was striated, the opposite faces being in the same direction, and the other faces at right angles. Crystals of gold, which were also found in cubes, were never striated in this manner, so that by observing this peculiarity the student would be able, in cases where he could only see one face of the crystal, and was unable to apply to it any other test, to determine, without hesitation, that it was not gold. Iron pyrites was sometimes found in other forms, such forms being peculiar to particular districts. Pentagonal dodecahedrons were found in Elba, octahedrons in Sweden and Cornwall, and rhombic dodecahedrons in the Brazils; it was found also inside the ammonites obtained in the neighbourhood of Lyme Regis. The lecturer exhibited some very remarkable specimens from Dover, having a radiated structure, and some nodules, a section of which showed an inner circle of white efflorescence, composed of very minute crystals, which explained the process of decomposition. He also showed some specimens from the neighbourhood of Bristol, which were composed almost entirely of the teeth of fish, and other organic remains; and others from the chalk cliffs of Dover, in which there was a mass of flint formed around organic matter, and then subsequently the sulphuret of iron. The chief attraction of this part of the lecture, however, was a remarkable specimen which he had just received from Cornwall. It consisted of a hollow mass, the internal part of which was thickly coated with distinct crystals, and the external part with wonderfully perfect casts of other crystals. These casts were supposed to be those of the sulphate of barytes, which had been dissolved, leaving the matrices in a perfect form.

Prof. Tennant exhibited a vast number of other specimens, and mentioned that, many years ago, shoe buckles, and other ornaments of iron pyrites, were quite fashionable. Mr. Thomassin, of Birmingham, happening to be acquainted with a place where a large quantity of this mineral could be found, made a very considerable sum of money by their manufacture; and Goldsmith, in his comedy of *The Stoops to Conquer*, was understood to allude to this fashion when one of his female characters speaks of her “marcasite necklace.” Iron pyrites was very widely diffused. It might be seen on a wet morning projecting from the dark-coloured paving stones of our streets; it formed a part of the fossil fruits and woods of the London clay formation at Sheppey; it sparkled in the inferior coals brought from Staffordshire, Derbyshire, and Nottinghamshire, and which, when exposed to the heat, produced a series of small explosions, scattering its

prismatic particles over our carpets and furniture. It was found in the Oxford clay, in the lias bone beds, in the gault, and it often coated fossils of the ammonite, belemnite, and pentacrinite kinds. Although it was often mistaken for gold, specimens of it had been found in Scotland, which, on being what was technically called “sweated,” had produced minute globules of that precious metal. There were one or two specimens of this kind in the British Museum.

After briefly alluding to magnetic iron, he proceeded to describe magnetic oxide of iron. It was found in granular masses, sometimes in distinct octahedral crystals, and in hot climates it was frequently disseminated in sand. In India it was found through the metamorphic rocks, and it was plentiful in the basalt of the Giant's Causeway, where it might be observed in thin seams of a dark colour. It always acted upon the magnetic needle. In Norway and Sweden it was sometimes found in rhombic dodecahedrons. He also described a beautiful specular variety, which was, in fact, a peroxide of iron, and was found in the Isle of Elba.

Hematite iron was found, when broken, to have a radiated structure, and was red, black, or brown in colour. It was this substance which was used by bookbinders and china burnishers under the name of bloodstone. It occurred in botryoidal, stalactitic, and mammillated masses. It was often exceedingly fibrous. Iron coloured water in a very curious manner. At the Elack Gang Chine Cliff of Shanklin, water of various colours oozed out, presenting a most remarkable phenomenon. The colouring matter was the result of the different stages of the oxidation of iron. Prof. Tennant concluded with a brief enumeration of several other varieties.

Original Correspondence.

VENTILATION OF COLLIERIES.—“GOVERNMENT INSPECTION.”

Sir,—It is really too bad that a great country like this should be governed by such a Ministry as the present, who do everything by halves. Had Sir James Graham been Home Secretary, would he have allowed common sense to have been so far outraged as to allow it to go forth to the world that four men (be they ever so clever) can inspect and report on the varied risks and dangers of a miner's occupation, or would he have waited until that awful knell was sounded at Nithshill, which will surely arouse Sir George Grey from his lethargic slumber, to exercise those powers with which Parliament has invested him?

It is hardly fair to say the 50 men at Paisley might not have been sacrificed; but it is fair to say that Sir George Grey, by not appointing a sufficient number of inspectors, has not done all in his power to avert such heart-rending scenes as those of Saturday and Sunday last. Such accidents will occur under the best and most skillful management, but the Minister ought to have it in his power to say—“I have done all I can, by appointing a sufficient number of inspectors, in whose abilities I have confidence; and if they cannot detect any dangerous warnings, it is quite out of my power to do more.” Now, can Sir George say this? Your readers will at once answer emphatically, no! You, Mr. Editor, and your numerous correspondents, have, over and over again, given the warning that it was physically impossible for four men to render the inspection of mines at all efficient, and that 20 could hardly be an effective staff; and supposing the cost would be 10,000*l.* a year, would the most rigid economist grudge the amount for such an object? Whilst Mr. Dunn is doing his best to avert such scenes at Jarrow, is it possible he can watch over Scotland also? In fact, is there not sufficient to engage the attention of all the four inspectors in Durham, Northumberland, and Scotland? Would not Yorkshire engage the time and attention of one, Lancashire and North Wales one, North Staffordshire and adjoining counties one, South Stafford and Shropshire one, besides South Wales and the west of England?

Now, it appears strange to me that an Act should be passed, giving the power of inspection, and that it should almost be a dead letter, because it would cost a few thousands to render it effective, and thus save the lives of poor hard-working miners by fifties, whilst millions are squandered away upon the African squadron. If this is not “penny wise and pound foolish” economy, I know not what is.

I trust you will continue the same untiring advocacy of this cause that you have hitherto done, and that the daily press will also take the matter up in earnest, and then it would not be allowed to remain in this unsatisfactory state much longer.—A.: Newcastle, March 17.

THE INSPECTION OF MINES.

Sir,—Where are the inspectors? The work of death goes on in our mines as rapidly and as quietly as if the Act were not in existence. True it is that we have heard of Mr. Dunn being at Jarrow, of Mr. Blackwell at Aberdare, of Mr. Morton's equivocal lecture at Wakefield, and of Mr. Dickenson nowhere; but surely this is not all we are to expect from them. The coroners' courts are as life as ever, and the juries' verdicts as inoperative for good as in times past. The even tenor of their way is rarely disturbed by the presence of an inspector, and the good to be realised from this provision in the Act is yet prospective only. How many collieries have been visited, and how many remain, and must long remain, uncared for, are queries more easily asked than answered. But one thing is certain, and that is, that a most serious responsibility rests on those who have the power, and not the will, to carry this Act into full operation throughout the country. In Great Britain there are at least 12 distinct coalfields, at considerable, and in some instances very great, distances from each other; it has been estimated that the number of collieries are at least 1200; yet, the inspection of all these mines is entrusted to four persons! Whole districts must necessarily be neglected, and even such as are favoured by having an inspector cannot reap much advantage from it, as his visits to each colliery must be too “few and far between” to be of any practical advantage. If the administration of this law continues as it now is, it will cause not only a bitter disappointment in the public mind, but will excite stronger and more dangerous feelings in the breast of every collier in Great Britain.—SCRUTATOR: March 20.

THE JARROW COLLIERY.

Sir,—The communications which have appeared in your columns in relation to the transactions which have taken place between the viewer and the pitmen in this colliery have excited a universal and a deep-felt interest among all concerned in mining. The able and fearless letters of your correspondent “M.” entitle him to the gratitude of the colliers, and the thanks of the friends of humanity. He has so well discharged the duty which he gallantly undertook, as to render further comment unnecessary. The facts he adduced remain uncontradicted, and his strictures, although severe, appear, unhappily, to have been but too well deserved. Backed by public opinion, and the justice of his cause, we may hope that his warning voice has been attended to, and has proved a more efficacious remedy for the prevention of fatal accidents than the small measure of protection which has been doled out by the Legislature.

It would be interesting to many of your readers to learn the result of what has taken place at Jarrow, and if the reasonable demands of the pitmen have been complied with. From no one would this information be more gratefully received, or more highly appreciated, than your correspondent “M.” and it is to be hoped that he will readily comply with this request. The great and obvious danger of using gunpowder in fiery mines, renders it very desirable that some mechanical means should be devised so as to supersede the necessity of having recourse to it, and at the same time to diminish the cost of producing the coal. Two very ingenious machines for this purpose have been sent to the Grand Exposition, a more extended notice of which will be sent to you shortly.

Neath, March 18. J. RICHARDSON, C.E.

AMSTERDAM WATER-WORKS.

Sir,—A prospectus has just been issued, announcing the formation of a *Société anonyme*, for supplying the city of Amsterdam with pure water from the Lek and its tributaries, a affluent of the Rhine; and, while I acknowledge the great boon which an ample supply of water would confer on the inhabitants, and the profitable results which would ensue to the proprietors, provided the undertaking was properly and economically carried out, I have certain misgivings that the present attempt to form a company will meet the fate of a former one, which was being formed in 1849. The circumstances under which the directors of that company became paralysed were the unnecessarily enormous amount of capital required to be raised, and the large bonus agreed to be given to the concessionaires; while Mr. Simpson, the eminent hydraulic engineer of Great George-street, who was to act in this country, discovered that the plans of the Dutch engineers were faulty in the extreme, and their estimates ridiculously erroneous, and that instead of a capital of 600,000*l.*, one of 350,000*l.* ought to be ample for the purpose. Water is brought in boats from the Rhine and

other rivers at 2*d.* in summer, and 11*d.* in winter, for about 6½ gallons, or ½ per gallon in the former, and 2*d.* in the latter; and we may suppose with what pleasure the people of Amsterdam would receive and pay a good price for an unlimited supply; but, notwithstanding the importance of the undertaking, unless it is carried out in an economical, honest, open, and *bonâ fide* manner, it will undoubtedly prove a similar failure; or, if it should wriggle into existence, will never pay the shareholders for their outlay. I will, therefore, conclude these remarks, by asking why a capital of 500,000*l.* is required, as I observe Mr. Simpson is still the engineer, and it is stated in the prospectus that it will never be wanted; and what is the amount now agreed to be paid to the concessionaires? It was said to be the enormous sum of 60,000*l.*, and this was the cause of a large capital being a *sine qua non*.—INVESTIGATOR: Knight Rider-street, March 20.

FLOATING OF SOLID IN FUSED IRON.

Sir,—Mr. Mushet's suggestion to account for the floating of solid when thrown into liquid cast-iron does not appear to me to be satisfactory, as I cannot perceive how a sort of boat formed by the chilling contact of the cold metal could support a substance of greater specific gravity than itself. Do you not think that expansion of air in the cold metal, when subjected to the high temperature of the liquid, makes it specifically lighter?

Dorchester, March 17. E. P.

ON THE ASSAYING OF COPPER ORES.

Sir,—The assaying of copper ores, or cupriferous products generally, by the dry way, although of great practical service, as affording a quick means of ascertaining approximately the amount of copper contained in any given sample, yet, as is well known to all interested in these matters, the results are far from being correct; as, if the operation is conducted so as to obtain the whole of the copper contained in the ore, it is nearly always contaminated with the other metals existing in the ore—such as iron, tin, lead, &c.; or if the operation is continued so far as to obtain the copper in a fine state, it is generally accomplished with leaving a considerable amount of copper in the slag, or scoria, from the several fusions.

The method proposed by M. Pelouze, founded on the simultaneous precipitation and decolouration of an ammoniacal solution of copper by the mono-sulphurets of sodium, or potassium, is a very useful process, and under certain conditions, highly valuable.

The process which I am about to describe will, I think, be found very advantageous from its accuracy, and from the ease and facility with which it is conducted. It is based upon the decolouration of an ammoniacal solution of copper, by fine cyanide of potassium or sodium, or ammonia or hydrocyanic acid, in a free state; but I prefer to use cyanide of potassium, as being less subject to decomposition, and more readily obtained in a state of purity in commerce than the other substances named.

The method of operating is as follows:—Take a given quantity of pure copper (my, for instance, 10 grains), place it in a flask, and dissolve in nitric acid; add ammonia in excess, and then make it into a bulk of about 2500 grs. by measure by the addition of water, although this is not absolutely necessary. Dissolve 1 oz. (Avoirdupois) pure cyanide of potassium, free from ferro-cyanide or sulphuret of potassium, in 5 ozs. by measure of water, filter, if necessary, and place the solution in a well-stoppered bottle, till required for use. I then ascertain the quantity of this solution of cyanide of potassium required to decolourise the solution of copper by taking a given quantity, in any graduated vessel, as a burette, and pour it by degrees into the solution of copper, adding the last quantity drop by drop till decolourised. This is very easily perceived, as there is no precipitate to interfere; and the operation is conducted at the ordinary atmospheric temperature. I mark down the quantity required (say 500 grains) by volume. After having established this date, it is very easy to estimate the quantity of copper contained in any ore or cupriferous product, by simply dissolving a certain quantity (say, 20 grains in nitric or nitro-muriatic acid), with the assistance of heat, if required, as in the case of some sulphurets, the addition of ammonia in excess is necessary; and if any considerable quantity of iron, or alumina, was present in the sample, it should be allowed to digest at a gentle heat, under ebullition, to make sure that all the copper is taken up by the ammonia, filter into a flask, wash the precipitate with water, and make into a bulk of 2500 grains, as when taking the standard of the solution of pure copper. All that now remains to be done is to allow it to get cold, and add the cyanide of potassium, until decolourised, noticing the quantity taken. I will suppose it required 400 grains by volume of the cyanide solution; then from the proportion—500 grs. K Cy. : 10 Cu. :: K Cy. 400 : Cu. 8—the quantity of copper contained in the 20 grains of material taken for analysis, or 40 per cent. If the ore taken was a sulphuret, it is sometimes advisable to filter, in order to separate the sulphur, before adding the ammonia, or else to use a dilute solution of ammonia, and a gentle heat when digesting, or small particles of sulphuret of copper might be re-produced, especially when the precipitate produced by the ammonia is a bulky one.

When manganese is present in the ore—easily ascertained by preliminary examination by the blow-pipe—it is best to employ carbonate of ammonia to form the ammoniacal solution, as the carbonate of manganese is very little soluble in this re-agent. The reason for this modification is that, on adding cyanide of potassium to an ammoniacal solution of copper containing that metal, it assumes a slightly yellowish tint, which would interfere a little with the estimation of the last few 100ths of copper.

The above remarks also apply to arsenic, when present simultaneously with iron in the sample, as the nitric acid converts it into arsenic acid, and this forms with the iron a salt arseniate of iron, soluble in ammonia. I have easily obviated this by adding to the nitric, or nitro-muriatic solution of the substance, a little proto-salts of tin, or sulphate of magnesia, as the arsenic is thus rendered insoluble, on afterwards adding the ammonia.—H. PARKES: *Burry Port Copper Works, Llanelli, March 12.*

IMPROVEMENTS IN SMELTING IRON.

Mr. Andrew Barclay, C.E., of Kilmarnock, has secured a patent for a peculiar arrangement of blast-furnace for the smelting of iron, which is stated to effect a considerable saving in fuel, time, labour, and expense. The furnace is circular, or may be of any other suitable internal shape, and is provided with three tuyères, communicating with the main cold air-pipe by vertical branches. Each tuyère has a triple branch, furnished with stop cocks—one of which opens into the small end of a bell-shaped chamber, forming part of the furnace; while the other two communicate with it at the sides near its junction with the body of the furnace. Each chamber has a charging place, closed by a double door, for the introduction of fuel while the blast is on. Fuel and carbonaceous matter being introduced into the chambers, in addition to the charge of ores, the blast is turned on at each central pipe, so that the fuel is quickly ignited; but as the air passing through the incandescent fuel becomes deoxidised, more air is supplied by turning on the blast through the side pipes. More equally to diffuse the heat, additional tuyères may be provided, which will enable the furnace to perform the double operation of combining and separating. In another arrangement there are also three tuyères—the blast-pipe of each of which terminates in a forked branch. One arm of this serves to admit air above the burning fuel, while the other conducts the blast beneath the grate-bars, and through the fires in the chambers to the body of the furnace. There is also another construction, in which two tuyères are employed; and in each case the blast can be so regulated as to vary the quantity of oxygen, according to circumstances, and the quality of iron required. When it is to be converted at once into malleable iron, it is run into ladles at the time for charging the puddling-furnaces, and poured in them in a melted state, with a sufficient addition of carbonaceous matter. It is recommended, when erecting furnaces on this construction, to have the floor of the blast higher than the charging door of the puddling-furnace, to facilitate the operation. There is also a claim to a steam cylindrical blower, which keeps up a regular blast by alternately filling with steam and condensing it, effected by any proper mechanical arrangement of stop-cocks and valves.

IMPROVEMENTS IN GAS RETORTS.—Mr. James Rennie, of Falkirk, has taken out a patent for a revolving gas retort, thus bringing every part of the contents under the immediate action of the fire, and, at the same time, equalising the wear of the retorts. They are formed of clay, connected at the end with a short metal shaft, working in a plummer block; the necks also formed of metal, bearing in plates attached to the front setting. The pipe leading to the hydraulic main has a ball and socket joint. On the lid is a ring of teeth, which gear into a pall on the end of a lever, connected by a toggle joint to the furnace door, in such manner that every time the door is opened the retort makes a partial turn. When more than one retort is used, the teeth gear into each other, so that the rotative motion is simultaneous.

IMPROVED ELECTRO-TELEGRAPHIC INSTRUMENTS.

In the complex telegraphic instruments at present made use of, there are several sources of annoyance and vexation, which are productive of much misunderstanding and waste of time in conveying intelligence; and among them all, probably, the most injurious is the demagnetising the needles by currents of atmospheric electricity. In his incessant endeavours to simplify to the utmost the telegraphic conveying instrument, Mr. G. Little has at length hit upon a plan by which he entirely dispenses with the axis on which the needles in the present arrangement turn, secures a permanent stock of magnetic power, by which his indicators are kept constantly supplied, and renders them proof against currents of natural electric discharges, and should such a current deflect the needle from its proper position, the operator, by a movement of thumb and finger, can immediately re-adjust the instrument. The great cost of the apparatus, too, Mr. Little, by his discoveries, has reduced to about one-eighth of the present price: indeed, if ornament is entirely left out, an instrument in every way effective for all useful purposes, can be made for 1-24th of the present cost, while the whole affair is so simple, and composed of so few parts, that the operator can himself always adjust his mechanism, which appears to us next to impossible to get out of order, except by absolute violence.

So important does the improvement which Mr. Little has just patented appear to us, that we are having diagrams prepared to enable us to give a clearly illustrated description in next week's Journal, as any attempt to follow up these introductory remarks with an explanation without cuts, would probably only mislead, and certainly could not convey so perfect an idea of the manipulation as we shall be able to give with their aid.

PROGRESS OF THE ELECTRIC TELEGRAPH.

Two of the greatest inventions which have been brought into operation within the last half century are steam and electricity, which are the means of establishing an international intercourse between all nations. We now have fine-built steamers running to every part of the globe, and railways from one end of the United Kingdom to the other, which have afforded every facility for the development of the electric telegraph, which, to a great commercial and maritime country like this, is of the greatest advantage. The lines of communication have been now so extended as to embrace many of the principal towns and sea-ports of the United Kingdom, between which commercial and private despatches can be transmitted at all times, and answers received in a few minutes. With the Chester to Holyhead line, which will be completed in a month or six weeks, a great portion of the telegraphic communications from one end of the country to the other will be in full operation, extending over nearly 6000 miles in length. The Electric Telegraph Company have no less than 300 stations in different parts, comprising many of the large manufacturing towns, agricultural and mining districts, steam-packet stations, and Government arsenals, dock-yards, &c. The "British Telegraph Company" are making active progress in laying out an efficient system of telegraphic communication in several parts of the kingdom. These arrangements will afford duplicate lines of telegraph to the most important towns, and will fill up the blanks that are now left in many parts of the country. Our neighbours on the continent have determined not to be behind us, and the electric system is now adopted not only in France, Belgium, Holland, but the whole of Germany, the greatest portion of Russia, Austria, Italy, and will shortly be carried out in Spain; the line from Madrid to Aranjuez is completed, and others are being laid down to Seville, Cadiz, Valencia, Barcelona, and the frontiers of France, so that before long there will be a general electric telegraph communication from one end of Europe to the other; and when the submarine telegraph from Dover to France is accomplished, we shall be able to receive and transmit information to every capital on the continent. In France the following lines are open:—Paris to Rouen, Havre, Amiens, Arras, Lille, Valenciennes (to Belgium), Calais (and shortly to Boulogne-sur-Mer), Dunkirk, Orleans, Blois, Tours, Angers, Bourges, Nevers, Chateauroux, Chalon-sur-Marne, and then to Lyons, Marseilles, Toulon, Montpellier, Bordeaux, Toulouse, Bayonne, and the principal towns and sea-ports, in rapid progress towards completion.

From Mexico, we learn that, in consequence of the conclusion of the telegraph contract, an engineer, with wire and apparatus, has sailed from New York. One hundred and twenty miles of line between Mexico and Ojo de Agua are to be opened by the 1st May, and the whole enterprise will include a line from Vera Cruz to Mexico, of which Ojo de Agua is the first section, and from Mexico to Acapulco, uniting the Atlantic and Pacific ports. Another line will be laid from Mexico to Tampico. Thus we shall have a better chance of getting advices from Mexico, and the bondholders will get the latest advices as to the receipts on the Pacific coast.

THE ELECTRIC TELEGRAPH.

In common with our local contemporaries, we have been compelled of late to notice the remissness which too often characterises the management of the electric telegraph; and certainly we have had great reason to complain during the late ministerial crisis. It really seems as if a period when more than ordinary efforts should have been made to secure early and accurate intelligence had been selected by the servants of the Telegraph Company for a "great exhibition" of their negligence and incapacity. For some time past we have not received one word of foreign intelligence beyond what appeared in the London morning journals of the day previous to our publication, and even that on several occasions has not reached us till after the papers from which it was originally taken had arrived in Glasgow per railway. During the recent crisis the transmission of news from London was delayed much longer than it should have been, and when the intelligence did arrive accuracy was certainly not its characteristic. To have printed the manuscript as it came from the telegraph office, would have been absurd; we were, therefore, obliged to extract as much sense from it as we could, and give the result, which was often problematical, in our own language: the Parliamentary proceedings, especially, were wretchedly reported, and occasionally omitted altogether. The speakers, also, were misrepresented—for example, on Friday the 28th ultimo, Sir J. Graham was made to declare that he was opposed to any extension of the suffrage, whereas he said exactly the reverse. The telegraph people seem to have a violent antipathy to everything relating to Scotland. They did not send Mr. Hume's important interpellation relative to the extension of county courts in this part of the kingdom; they omitted Mr. Stuart's first question regarding the bearings of the anti-Papal Bill on the position of the Episcopal Bishops in Scotland; and when the same gentleman, on a subsequent occasion, from his place in the House of Commons, asked if the measure would affect the Scotch bishops and deans, we were supplied with the satisfactory and definite information that "Lord J. Russell replied," but what was the tenor of his reply the telegraph failed to indicate. The same thing occurred with respect to the meeting of liberal members held on Tuesday week at Lord J. Russell's official residence. A brief report of that meeting was published in the *Globe* and *Sun* at four o'clock the same afternoon, and might easily have been reproduced in Glasgow by six; but the telegraph only supplied the first few lines of Lord J. Russell's speech as we were going to press at half-past one next morning, while that which it was important to know—namely, the spirit evinced by the meeting towards the Whig Government—did not reach Glasgow at all. On the same evening the House of Lords transacted some public business, but not the least notice was given of it. Further, the conclusion of last Friday night's debate in the House of Commons on the Papal Bill did not reach us till after our paper had gone to press at two o'clock on Saturday morning, though the House adjourned before nine o'clock the previous evening, while the Lords' report, meagre as it was, did not arrive in Glasgow till seven hours after the rising of the House. The speeches in the lower House were fearfully mangled. According to the telegraph, Lord J. Russell moved the postponement of the order for the second reading of the Ecclesiastical Titles Assumption Bill till Friday next; then Sir G. Grey, at the commencement of his speech, moved the second reading of the bill; but the right hon. baronet concluded with a motion similar to that said to have been proposed by the noble lord, who, we need hardly say, made no such proposition. Such are a few of the delays, blunders, omissions, and representations of the electric telegraph; and if such is the case with respect to political intelligence, what must it be with the markets and the purely commercial news, in which figures are largely dealt with? This is a point which we may safely leave to the imagination of our readers. It is not our business to suggest a mode by which these evils may be remedied; that is the duty of the directors or managers of the company; but when we are called upon to pay a considerable sum annually for what is not of the least advantage to the majority of our readers—for what, indeed, they have rarely an opportunity of availing themselves of—we do think that attention should be paid to our remonstrances, and that an attempt should be made to give us value for our money.

We observe that a strenuous effort is being made by the Electric Telegraph Company to preserve, at all hazards, the injurious monopoly which they have so long enjoyed. Some time ago the directors of the London and North-Western Railway Company expressed in writing their willingness to allow the British Electric Telegraph Company, which was incorporated last session after a protracted and an expensive contest, to lay down wires along that line of railway; but the old company are now urging the directors to rescind from their agreement, and to give them the exclusive use of the railway for telegraphic communication, for a period of 20 years, and thus completely shut out all competition, and prevent any reduction of charges. It is the interest of the whole community, and especially of the mercantile body, to prevent such a monopoly, and we trust they will use every means in their power to defeat it. A memorial to the directors of the London and North-Western Railway Company lies for signature at the bar of the Royal Exchange, and we would urge all to sign it who prefer moderate rates and efficient management to defective service and exorbitant charges.—*Glasgow Constitutional*.

ATMOSPHERIC INFLUENCES.—NEW SERIES—No. V.

BY FRANKLIN COXWORTHY, AUTHOR OF "ELECTRICAL CONDITION."

The carboniferous era, so far as regards the coal bed formation, was disposed of in No. 4; we shall now proceed to the consideration of the atmospheric influences which were created during that period, and endeavour to suggest a system more in accordance with recently admitted principles, to account for the metalliferous formation, the existence of boulders, and other conditions, than has hitherto been afforded. The circumstances under which carbonic acid is received by the plant as food, is not material to the question; whether it be through the root as sap, as we believe, or directly through the leaf, the influence of vegetation on this gas is to solidify the carbon, and to liberate the oxygen, the proportions of which are as 6 to 16, or, by actual weight, as 27 to 73; therefore, for every 27 tons of carbon deposited in the coal beds and remaining vegetation throughout the world, there must have been liberated to the atmosphere 73 tons of oxygen; and as oxygen is matter, and all matter is subject to the universal law of gravitation, the specific gravity of this gas (1.1111) would assign to it a position, as generated, between the carbonic (1.500), and nitrogen (0.9722) atmospheres. Connected with this period there are certain great facts which it would be futile to evade in any inquiry having the slightest pretensions to truth, and are in no way reconcilable to the doctrines of the geologist. On the west side of America there is a chain of mountains stretching from north to south, which has an altitude of about five miles above the level of the sea; and on the eastern side of the other half of the earth, there is a similar chain of equal height, the intervening country between these two chains being interspersed with mountains of less magnitude, such as the Alps.

These gigantic elevations the geologist assigns to two causes—upheaving from below, and the contraction of the earth while cooling having squeezed out the liquid matter from within; but he has failed in demonstrating what should impart an upheaving influence in matter that is gradually cooling and contracting; and Mr. Mushet has most satisfactorily shown that if the matter were "squeezed" out by the contraction of the crust, the liquid could do little more than fill the fissures; these reasons must, therefore, be abandoned as not tenable; and as in 1847 we subscribed to the latter, our thanks are due to Mr. Mushet for the disabuse of our mind from an error, the reception of which may be deemed excusable on no other ground than the novelty of the subject to which new principles were being applied. Since that period, however, great concessions have been made by the scientific world. Sir John Herschel admits that gravitation is referable to some electrical condition, and Professor Faraday allows that oxygen is highly electric; we have, therefore, all the conditions necessary to explain the successive operations under which the earth was brought to its present condition; nor will it in any way affect the question, whether, in point of fact, oxygen be merely a good conductor of electricity, or is electric within itself—a question of high interest for enquiry hereafter, in conjunction with the different electrical conditions of all elementary bodies and chemical compounds; for the present we will accept Professor Faraday's admission, and regard it as highly electric.

As the carbonic acid atmosphere was disposed of and replaced by one of oxygen, it is clear that the earth must have been progressively, but slowly, subjected to the combined and increasing influences of induration and uplifting as the oxygen atmosphere increased in volume; the hardening of the matter being referable to the absorption of electricity, the bond in matter, and the uplifting, not upheaving, being the natural consequence attendant on two bodies being brought within each other's influence when in opposite electrical conditions—combined operations, that would not fail in preparing the soil for the vegetable kingdom; and it is observed, in reference to the carboniferous period, that "some of these conditions have been repeated in a fainter degree at subsequent epochs, and given rise to limited carbonaceous deposits; but as the various changes, physical and organic, working in the earth's crust, advance towards the present state of things, an approximation to the conditions now observable, and a receding from those which once so greatly promoted the growth of succulents, are in strict accordance with the laws of Nature," the latter part of which remark applies, we conceive, more to a later period in the creation than to that which followed the coal bed formation.

These principles, we apprehend, came into operation only towards the close of the carboniferous era, and one-fourth only of the globe being covered with land, it must be obvious that the action would be much greater at some periods than at others. The liquid mass under this crust being also subject to gravitation, its upper portions must have been the first acted on, and would, therefore, be periodically drawn to the surface; and, on an inspection of the granitic formations, these will be found in layers, as if deposited at different periods. The headlands of Castle Tregyn, in Cornwall, afford perhaps as striking an illustration of these operations as well could be adduced. Here are rocks of a gigantic nature actually thrown out of their perpendicular, but still retaining the order of successive layers of stone, as formed by the periodical outpourings from the liquid portion of the earth's crust, whilst the layers, on which rest the Logan rock, have not been disturbed from their upright position by the uplifting of the soil on which they rest; and other beautiful illustrations are also afforded on the coast of Cornwall, many of the headlands being several hundred feet high. The gradual raising and draining of a great portion of the land would prepare it for a more general and more fibrous order of vegetation, calculated to accelerate the generation of the oxygen atmosphere, which, when its influence was unimpeded, was calculated to produce those gigantic effects so evident throughout the world; and, about this time, we conceive, was lifted and crystallised the materials composing the old red sandstone in Scotland referred to by "G. G.," but these effects, as in the first solidification of the earth, could not have been continuous but periodical. Oxygen is a rapid chemical agent, and readily combines with carbon, either under the influence of combustion or the decomposition of vegetable matter, and, therefore, when it came into contact with the earth, could not fail in generating large volumes of carbonic acid, which would arrest its operation on the lower lands. Whole forests fell a prey to this devouring element, and being soluble, by which property it would gain access to the vegetable matter in water, by its action the whole of the hydrogen was converted into a light carburet, and a portion of the carbon into carbonic acid; and the anthracite is of more recent origin than the coal bed formation.

We are now, however, referring to principles connected with the formation of our atmosphere—a subject for after consideration; and as we conceive we shall be less ambiguous, or more lucid, in the general detail of our views, if the facts be considered consecutively, we propose doing so in our next. We will, therefore, merely remark for the present, in reference to the metalliferous formation, that the high attractive powers of a highly positively electric body on one equally negative, must necessarily have been deep-seated, and, consequently, would draw up not only the elements of granite, but also the ponderous metals—many of these possibly in the gaseous form; and as at the same time acids would be formed, more especially the sulphuric, to the subsequent action of these must be referable the condition in which we find some of the metallic veins; and it must be equally clear, that the heavier the metal the lower must be its original position; and, being brought to the surface under the highest electrical conditions, must necessarily, as a general rule in the earth's crust, occupy the highest, although in its ascent it could not fail in carrying up with it matter of less specific gravity—such as silica, and the other component parts of granite. Gold, which is not acted on by the acids, is found intermingled with quartz in a pure state; but the baser metals in lower districts, as Cornwall, although frequently native, generally exist as salts. We have now before us a beautiful cluster of quartz and copper ore, which affords evidence that the crystallisation of both was simultaneous; and its granitic base also contains the metal.

CASTING OF STEAM-CYLINDERS FOR THE CUNARD STEAMSHIPS "PERSEA" AND "ARABIA."—At Mr. Napier's engineering works, Lancashire, there are two steam-cylinders, recently cast, which are for one of the new Cunard steamers, of larger dimensions than any hitherto made in this country or elsewhere. The diameter inside is 103 in., and the length of stroke about 10 ft. The largest hitherto fitted up in the steamers of this celebrated line was 96 in.; which is also the size of those on board the Collins' line of American steamers. The largest slotting machine in existence is being fitted up at Lancashire Works, by Mr. Robert Napier. Some idea of the immense proportion of this huge mechanism may be formed when it is stated that the castings forming the machine weigh about 100 tons. It is intended for cutting vertical grooves in large wheels, shafts, &c.; and provision is made for screw-propeller shafts of the largest size on end, to have the requisite grooves cut internally or on the surface. When a single tool for performing apparently a very simple operation weighs 100 tons, the immense magnitude of the machinery prepared by it may be imagined. The vertical motion of the cutter is given in the ordinary way, by means of a crank motion overhead.—*Glasgow North British Mail*.

AMSTERDAM WATER-WORKS COMPANY.

(Société Anonyme).—RHINE SUPPLY.
FOR THE PURPOSE OF SUPPLYING THE CITY OF AMSTERDAM WITH WATER.
To be established under a Concession from His Majesty the King of the Netherlands.
Capital 6,000,000 florins, or £500,000 sterling, in 25,000 shares, of 240 florins, or £20 each.
Deposit 12 florins, or £1 per share.
Prospectuses, with form of application for shares, and every other particular, may be had on application to the Secretary, at the offices of the London Agency, 27, New Broad-street, City; or to Messrs. Marten and Heseltine, Finch-lane; or Mr. George E. Seymour, Throgmorton-street, London.

BRITISH MUTUAL GOLD MINING COMPANY.

Capital £50,000, in 50,000 shares, of £1 each.
Shares to be paid on allotment.—No Calls nor other responsibility whatever, this being specially guaranteed by the Deed of Settlement.
The Right Honourable LORD ERSKINE, Chairman.
LOUIS DE MASSIAC, Esq., Deputy-Chairman.
Bankers—Messrs. Ransom and Co.
THIS COMPANY IS ESTABLISHED FOR WORKING MINES IN CALIFORNIA.
The Directors have concluded an agreement with David Hoffman, Esq., for a Lease of a most valuable Mining District on the Mariposa River, belonging to the Hon. Colonel Fremont, and they are now making arrangements for sending out their first expedition. The mines are proved to be exceedingly rich, and stated to be inexhaustible: the company, therefore, feel assured of unprecedented success.
Applications for shares may be made to the offices of the Company, 30, Great George-street, Westminster, where every information may be obtained and prospectuses had.
JOS. DUNNING, Managing Director.

ANGLESEA COAL COMPANY.

Capital £20,000, in 2000 shares, of £10 each.—Deposit £1 per share.
ON THE COST-BOOK PRINCIPLE.
COMMITTEE OF MANAGEMENT.
H. GUEDELLA, Esq., Westbourne-place, Eaton-square.
EDWARD LORD, Esq., Portland-place, Reading.
JOHN OWEN, Esq., Thynon House, Newent.
Bankers—Messrs. Barnett, Hoare, and Co.
Mining Engineer—Thomas S. Strick, Esq., Clydach, Swansea.
Solicitor—N. Lindo, Esq., 17, King's Arms-yard, Moorgate-street.
The valuable COAL MINES belonging to the Company are situated in the VALE OF MALDREATH (county of Anglesea), which is intersected by the Chester and Holyhead Railway, and 16 miles distant from the port of Holyhead.
The estimates show a net profit of 3s. per ton on the Coal, and 7s. on the Coke.
The local markets for the sale of the Coal and Coke are almost unlimited, and both articles can be exported to Dublin at very remunerative prices.
The deposit will, it is calculated, cover the expenditure for six months, previously to which one colliery will return a liberal profit.
Prospectuses, reports, and forms of application for shares, to be had of the Committee of Management, at the Temporary Offices, 17, King's Arms-yard, Moorgate-street; of the solicitor; of Thomas Allsop, Esq., No. 1, Royal Exchange-buildings, London; and of Thomas H. Wisdom, Esq., sharebroker, Dublin.

ANGLESEA COAL COMPANY.—The Committee of Management hereby give Notice, that NO FURTHER APPLICATION FOR SHARES IN THIS COMPANY CAN BE RECEIVED AFTER FRIDAY, the 28th inst.
17, King's Arms-yard, March 21, 1851.

STEAM TO INDIA AND CHINA, VIA EGYPT.—Regular

MONTHLY MAIL (steam conveyance) for PASSENGERS and LIGHT GOODS TO CEYLON, MADRAS, CALCUTTA, PENANG, SINGAPORE, and HONG-KONG.
THE PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY
BOOK PASSENGERS and RECEIVE GOODS and PARCELS FOR THE ABOVE PORTS by their steamers—starting from Southampton on the 20th of every month; and from Suez on or about the 10th of the month.
BOMBAY.—Passengers for Bombay can proceed by this company's steamers of the 29th of the month, to Malta, thence to Alexandria by her Majesty's steamers, and from Suez by the Honourable East India Company's steamers.
MEDITERRANEAN.—Malta.—On the 20th and 29th of every month. CONSTANTINOPLE.—On the 29th of the month. ALEXANDRIA.—On the 20th of the month.
SPAIN AND PORTUGAL.—Vigo, Oporto, Lisbon, Cadiz, and Gibraltar, on the 7th, 17th, and 27th of the month.
For plans of the vessels, rates of passage-money, and to secure passages and ship cargo, apply at the company's offices, No. 123, Leadenhall-street, London; and Oriental-place, Southampton.

OCEAN STEAMING—FIFTY MILES AN HOUR!

THE INVENTOR OF THIS NEW METHOD OF STEAMING AT SEA, with a view of GRANTING LICENSES, proposes PATENTING his INVENTION for INCREASING the speed of steamships. This will enable individuals, as well as companies, to run a steam sea manion to distant lands. Some of the advantages to be derived from this new principle are: the saving of time—its great safety, economy, and convenience in the building, common carpenters doing the work—its capabilities for carrying cabin passengers, say 200 in one manion.—J. BROWNE, Esq., Inventor, 30, Great Portland-street, Portland-place.—N.B. Accelerated speed is obtained by nullifying resistance.

STIRLING'S PATENT YELLOW METALS.—Adapted for

SHEATHING, BOLT STAVES, BOLT NAILS, DECK NAILS, as reported on by the late Mr. Owen, Supervisor of Metals to the Admiralty; also for PROPELLERS, FRAMEWORK SCREWS, PISTONS, CYLINDERS, COCKS (particularly where there is exposure to corrosion), RAILWAY CARRIAGE AXLE BEARINGS, and for all machinery subject to friction.
Messrs. GARDEN & MACANDREW, 34, Dowgate-hill, London.
Messrs. JOHNSON, 166, Buchanan-street, Glasgow.
Applications for licenses and other information to be addressed to the undersigned, at Garden and Macandrew's, No. 34, Dowgate-hill. ALFRED BARRETT, Manager.

NEWELL v. WILKINS AND WEATHERLY.—This case

was tried on the 20th and 21st of February, before the Lord Chief Justice of the Court of Queen's Bench and a Special Jury. The action was brought for INFRINGEMENT of Mr. NEWELL'S well-known PATENT for UNTWISTED WIRE ROPES. The Plaintiff obtained a verdict on all the issues raised, which has fully confirmed his Patent right. Since this verdict was obtained, the Master of the Rolls has granted an INJUNCTION AGAINST THE DEFENDANTS, to RESTRAIN them from MAKING these ROPES, or in any way infringing the Plaintiff's Patent.
This is to CAUTION ALL PERSONS AGAINST MAKING UNTWISTED WIRE ROPES, and AGAINST BUYING, SELLING, or USING such ROPES, unless made by Mr. Newell, and those to whom he has granted licenses.
Patent Wire Rope Works, Gateshead, Feb. 26, 1851.

UNDER BRITISH AND FOREIGN LETTERS PATENT.

HUTCHISONED STONE, BRICKS, &c.—TO LAND
PROPRIETORS, ENGINEERS, ARCHITECTS, &c.—THE SOFTEST STONE, CHALK, GYPSUM, CLAY, SAND, &c., INDURATED AS HARD AS GRANITE, will never vegetate nor disintegrate, being impervious to atmospheric action, &c. For all Foundations, external and internal Buildings, Docks and Sea Walls, Sewerage, Paving, Decorative and Monumental Works, the HUTCHISONED MATERIALS are unequalled for durability and low cost.—(See Testimonials and Prices.)
PASTEBOARD, SOFT WOOD, and other ABSORBENT MATERIALS, rendered WATERPROOF, and impervious from weather, vermin, &c. (particularly where there is exposure to corrosion).
LICENSES GRANTED ON LIBERAL TERMS.
Apply to Wm. HUTCHISON, Hutchisoned Stone Works, &c., Tunbridge Wells, Kent.

PATENT IMPROVEMENTS IN CHRONOMETERS,

WATCHES AND CLOCKS.
E. J. DENT, 82, Strand; 33, Cockspur-street; 34, Royal Exchange (clock tower area).
Watch and Clock Maker, by APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1836, 1840, 1842. Silver lever watches, jewelled in four holes, 7s. each; in gold cases, from 25s. to £10 extra. Gold horizontal watches, with gold dials, from 8s. to 12s. each.
DENT'S PATENT DIPIEDSCOPE.
or Meridian Instrument, is now ready for delivery.—Pamphlets containing a description and directions for its use 1s. each, but to customers gratis.

OFFICIAL CATALOGUE OFFICE, 29, NEW BRIDGE STREET, BLACKFRIARS, AND AT THE EXHIBITION BUILDING, HYDE PARK.

NOTICE.—ADVERTISEMENT intended for the FIRST

EDITION of a Quarter of a Million of the SMALL CATALOGUE, as also for the FIRST EDITIONS of the ILLUSTRATED, the GERMAN, and FRENCH CATALOGUES, should be sent in immediately, in order that they may be classified and printed forthwith:
1. Insurance Offices.
2. Literature and the Fine Arts.
3. New Inventions.
4. Agricultural Machines and Implements.
5. House Agency—Hotels, Taverns, and Lodging-houses.
6. Places of Public Amusement.
7. Railway and Steamboat Arrangements.
8. Classification of Trades and Miscellaneous.
SPICER BROTHERS, Wholesale Stationers, 7, Joint-Contractors to the CLOWES & SONS, Printers, Royal Commission.

EXHIBITION OF 1851.—T. P. AUSTIN, proprietor of

PEELE'S COFFEE-HOUSE, FLEET-STREET, begs respectfully to inform his friends and the public generally, especially those interested in the forthcoming GREAT EXHIBITION, that he has recently NEARLY DOUBLED THE SIZE OF HIS ESTABLISHMENT, which will enable him to afford increased comfort and convenience to those honouring him with their patronage. THE FILES OF NEWSPAPERS and PERIODICALS, for which Peele's Coffee-house is so celebrated, containing all the reports of the Royal Commissioners, will be available to those visiting this establishment.
* * * The Mining Journal, in addition to all Publications connected with the Mining interests, are regularly filed.—Ded and Breakfast, 3s., or £1 per week.

THE ARTIZAN CLUB ON THE STEAM-ENGINE.

Third Edition, in 1 vol., with 30 steel plates and 345 wood engravings, price 27s., cloth.
A TREATISE ON THE STEAM-ENGINE, in its APPLICATION TO MINES, MILLS, STEAM NAVIGATION, and RAILWAYS.
By the ARTIZAN CLUB.—Edited by JOHN BOURNE, C.E.
"The great merit of the present work is the vast quantity of information which it affords as to details of construction. In this respect it seems unrivalled. * * * It contains a vast store of invaluable facts."—*Civil Engineer and Architect's Journal*.
London: Longman, Brown, Green, and Longmans.

CURE OF ASTHMATIC COUGHS BY DR. LOCOCK'S

PULMONIC WAFERS.—From Mr. Ince Gains, medicine warehouse, opposite Stukeley's Bank, Yeovil:—"A lady purchased a 2s. 9d. box, and observed that she had suffered for years from an asthmatic cough, and spent many pounds on other medicines to no purpose. Weeks after the same lady called again, when she had been completely cured by them—merely one 2s. 9d. box. Other instances of the value of these wafers in curing, which prove the value of these wafers above other medicines for pulmonary diseases, coughs, colds, &c.—Iver Gains." To singers and public speakers they are invaluable for clearing and strengthening the voice: they have a pleasant taste.—Price 1s. 14d., 2s. 9d., and 11s. per box. Sold by all druggists. Also, Dr. Locock's Female Wafers, the best medicine for ladies: have a pleasant taste.—Price 1s. 14d., 2s. 9d., and 11s. per box. All pills under similar names are counterfeits.

WEST POLGOOTH TIN MINING COMPANY.

In 12,500 shares, of £1 each.

CONDUCTED ON THE COST-BOOK SYSTEM.

COMMITTEE OF MANAGEMENT.

Mr. SHERIFF HODGKINSON, 74, Cornhill.
 RICHARD HALLETT, Jun., Esq., Woodford.
 CHARLES HANCOCK, Esq., 25, Tokenhouse-yard.
 CYRUS LEGG, Esq., Berners-street.
 ALEXANDER PETER, Esq., Bishopsgate-street.

Bankers—Union Bank of London. | Secretary—J. H. Murchison, Esq.
 OFFICES.—20, ST. HELEN'S-PLACE, BISHOPSGATE-STREET.

This VALUABLE MINERAL PROPERTY, formerly known as Old Wheal Prosper, is situated in the parishes of ST. EWE and ST. MEWAN, near ST. AUSTELL, CORNWALL. It contains many lodes, and is bounded on the east by Great Polgooth Mine, and on the west by the Great Hewan Mine, the great productiveness of which is well-known. West Polgooth Mine is about three-quarters of a mile in length by half a mile in breadth, and has only been worked by the ancient miners to the depth of 34 fathoms, who, in consequence of the want of machinery and steam-power, were unable to work the mine to a greater depth. The adjoining mines, Great Polgooth and Great Hewan, have been worked—the former to the 110 fathom level, and the latter to the 128 fathom level, and returned large quantities of tin; and as the lodes of these mines run through the West Polgooth set, it follows that upwards of 70 fathoms of virgin ore ground remains unworked, containing, no doubt, as rich tin as the ancient miners obtained down to the present workings, and as has been produced in the adjoining mines down to the 128 fathom level. The fact of rich deposits of tin lying below the 34 ft. level being almost beyond doubt, induced a few parties, some time since, to purchase the set, and to commence operations, with a view of ultimately establishing a Company for the purpose of working the same; and with that view, under contract, there have been erected an engine-house, steam-engine, and machinery, and the mine has been put in a position to commence operations at once. The present company is formed for the purpose of effectually working the mine, and the amount proposed to be raised is considered ample to make it a good dividend-paying mine.

The present proprietors receive for their interest in the mine (being the cost of purchase, and the value of machinery and materials, &c.) the sum of £5000, the whole of which sum they take in shares in the present undertaking.

Reports from experienced mine agents are annexed, and a plan of the set may be inspected at the Company's offices.

Further particulars may be had, and applications for the remaining 7500 shares made to Mr. T. Uzzell, stockbroker, 75, Old Broad-street; Messrs. Hancock and Young, solicitors, 20, Tokenhouse-yard; or to the Secretary of the Company, 20, St. Helen's-place, Bishopsgate-street.

REPORT OF CAPT. J. WEBB, GREAT POLGOOTH MINE.

I have this day inspected Wheal Prosper, and hereby lay you the following report:—I find at the adit level by the old workings, but wherever a piece of lode is seen in the old workings it contains good tin, and from appearances, these lodes must have been found valuable. I observe there are lodes further south, which have also been explored to a great extent, as deep as the former workings could go for water. I am glad to find that you are erecting a steam-engine to prosecute the mine in depth, which I consider to be a very desirable speculation. I have little doubt but large quantities of tin will be found, and that the mine will become a valuable and lasting property. A moderate capital employed economically will put the mine into a good state of working. Every operation is being carried on in a mining-like manner.

REPORT OF CAPT. WILLIAMS, GREAT POLGOOTH MINE.

Agreeable to your request, I hand you a report of Wheal Prosper:—In examining this mine, I find the south lode is worked from the adit level to the surface for a considerable distance, which must have been worked by the old men centuries since for tin. In the attic of the old men's workings there are fine stones of grey copper ore to be found; I should think that this lode will make copper in depth, as it is a very strong lode, and it will form a junction, about 50 fms. east, with a strong copper gossan, which has been worked on the back for tin. Between the lode and the north lode I find a large masterly lode 34 ft. wide, which is nearly all worked away above the old men's bottoms, except a few arches, which is good work for tin—this lode will form a junction with many counter lodes on the course of the set. The north or main lode is nearly all taken away above the adit for upwards of 200 fms.; the attic in the old workings is good stamping work for tin. From what I can gather, the old men must have had considerable quantities of tin; likewise there are considerable workings upon this lode below the adit, which cannot be seen without the aid of machinery. I should think this mine a fair investment for capital, from the number of lodes and branches, and the extent of the old workings, and have no doubt but that it will make a good mine if presented.

WILLIAM WILLIAMS.

REPORT OF CAPTAIN PHILIP FINCH.

In accordance with your wishes, I have examined the set and underground workings of Wheal Prosper; there are five lodes—the tin lodes are worth about 2 cwt. of tin to the 100 sacks. On the north there are two lodes from 3' to 4 feet wide, with strong caps on each side underlying very quick; on the south the underlay of the lode is not so great, and much fairer for working; some of the lodes carry copper and form a junction with the other lodes. At some parts of the set the adit level takes the lodes about 20 feet deep. The set is very extensive, and from what is to be seen there has been much work done—the most I ever saw on the backs of any lodes. The set joins Hewan Mine, and the same lodes run through it. The ground is not very expensive to drive—say, 50s. to 60s. per fathom, and no timber is required: it joins the Great Polgooth to the east. I would advise you to sink 20 fathoms; there would then be workings that would last for years. Stamps is the greatest thing required—about £5000 would be amply sufficient. I have heard many good reports of this mine, but my opinion is that the set will form its own recommendation.

PHILIP FINCH.

REPORT OF CAPTAIN DAVIES, OF ST. AGNES.

In reply to your enquiries respecting Wheal Prosper, near St. Austell, I beg to remark that I believe there is every prospect, under proper management, of making that adventure a profitable investment. The set is a good tin lode, being adjoining Great Polgooth and Great Hewan tin mines, and the lodes of the latter mine are the very lodes on which you purpose operating extensively. I have had an opportunity of knowing as much of Hewan lode as any man in this county, and my expectations of deeper workings in your mine are very sanguine.

JOHN DAVIES.

REPORT OF CAPTAIN GRIFE, LATE OF THE CHARLESTOWN UNITED MINES.

I have this day taken a survey on the surface of Wheal Prosper. From the very favourable indications which it presents by such a number of pits being sunk by the old men on the backs of the lodes for tin, I am of opinion that there are several east and west lodes, beside others which are running at various angles, so as to present a number of points of junction, which are peculiarly favourable for the opening of ground of the most promising description. This mine is situated east of the well-known Great Hewan Mine, and on the same lodes which are running direct into the Great Polgooth set on the east; and are imbedded in a beautiful kyllas stratum. It is well known to be a good tin district. I am of opinion that Wheal Prosper will ultimately make one of the most flourishing tin mines in this county.

JAMES GRIFE.

FORM OF APPLICATION.

I request you to allot me shares in the "West Polgooth Tin Mining Company," and I hereby agree to accept such shares, or any less number, that may be allotted to me, and to pay the amount of the call on such shares.—Dated this day of 1851.
 Christian and Surname
 Place of Residence
 Place of Business
 Name of Referee

To the Committee of Management of the

"West Polgooth Tin Mining Company."

WOODMAN'S WELL AND BROADBRIDGE CONSOLIDATED COPPER MINES.—NEAR LYDFORD, DEVON.

ON THE "COST-BOOK" PRINCIPLE.

In 2048 shares, of £1 each.

The following gentlemen have consented to act as a Committee pro tem.:—
 THOMAS BIRCH, Esq., of Warwick-court, Holborn.
 MICHAEL FITZGERALD, Esq., 102, Sloane-street, Chelsea.
 C. V. BRIDGMAN, Esq., of Tavistock.

Bankers—The London and County Bank, London.
 Conductor of Mining Operations—Adam Murray, Jun., Esq.
 Purser—C. V. Bridgman, Esq.

OFFICES pro tem.—No. 4, KING-STREET, CHEAPSIDE, LONDON.

These Mines (formerly Wheal Susan and Wheal Broadridge) are situated in the Woodman's Well and Broadridge Estates, the property of his Grace the Duke of Bedford and John Weeks, Esq., in the parish of Lamerton, Devon. They are 2 miles from Brenton and Lifford, and 2 miles north of the great productive copper mines of Wheal Friendship. These mines were worked from March, 1845, to December, 1846, under the superintendence of Captain Jonathan Davey and Captain M. Stephens.

A sum amounting to upwards of £3700 was spent by the late company. A counting-house and smith's shop have been erected—the latter containing all the materials necessary for carrying on the works.

The copper ore alluded to in the subjoined reports was of good produce, and sold for £5 5s. per ton, when the standard was much lower than it now is; but just after this ore was returned, it was thought necessary to erect a steam-engine for the further exploration of the lode, unless the adjoining set of Broadridge (which had been granted by his Grace the Duke of Bedford to another company) could be obtained; and the operations at Wheal Susan were consequently suspended.

An amalgamation of the two sets has now been accomplished, and the present proprietors have obtained the necessary assignments of both of them: they extend about 650 fathoms east and west on the course of the lodes, and 350 fms. average breadth north and south, and contain three copper lodes, two of which have been partially worked.

The following report (among many others) has been received from Evan Hopkins, Esq.:

WOODMAN'S WELL MINE.

Feb. 10.—This mineral property is situated on the south side of the River Lyd, about 2 miles north of the Great Wheal Friendship, at Woodman's Well, in the parish of Lamerton. The general character of the formation is a dark slate, with even grain, intersected by beds of hornblende, and intersected by siltstones and massive quartz, spotted with copper ore.

The set contains three lodes, running more or less east and west, and underlying with, and these are intersected by some of the great Wh. Friendship cross-courses. One of the lodes has been tried to the depth of about 25 fathoms, and some tons of copper obtained; but in consequence of the expense attending the mode which was adopted to explore the lode, and finding the lode of a hard quartzose character, and only a few masses of ore, the mine was abandoned.

In such a formation as the above—viz., black sedimentary slate, resting on metalliferous ground, the ore is generally found dispersed in quartzose veins, and seldom in clear large masses; therefore, it becomes indispensably necessary to adopt at the commencement an economical system of exploration and extraction to ensure favourable results. An adit should be driven on the course of the lode, wide enough to admit a narrow railway and waggons; by this means the lode may be explored at a considerably less expense, and if it should be found of a low value, the economical means of working may still render it profitable.

From the same adit the other lodes may be intersected by a cross-cut. In the event of any parties taking this set, I would recommend them to confine their first operations, at least, to the above exploring adit; and if they do this, they will find the ground developed at a moderate outlay; and should the lodes only prove of a moderate quality, more may be done with them than with many of richer quality, carried on by a more expensive system.

About two-thirds of the shares are already taken, and more than the number that can be issued applied for. Applications will still continue to be received, and the preference given to respectable parties, who will receive a certificate receipt, on application to Mr. James Crofts, 4, King-street, Cheapside, London.

PROPOSAL TO WORK THE SCORE SILVER-LEAD MINE, ABERGEELE, FLINTSHIRE.

Held under Leases of 1-12th Royalty, with a Capital of £2000, in 100 shares, of £20 each.

This Mine, which extends from north to south 1000 yards, and from east to west 900 yards, and situated in the immediate vicinity of the productive Bodfryddan Mine, and within 5 miles of the great Talargoch Mine, has been partially worked by a steam-engine of 26-inch cylinder to the depth of 53 yards from surface, and now offered for sale for the sum of £2000; but to work and open the veins effectually east and west, may require a further sum of £1200.

The capital is proposed to be called up in the following manner—viz.: A deposit of £10 per share to be made in the first instance for payment of the purchase-money, leaving a balance of £2000 as working capital for the first six months; and, if required, four calls of 50s. each, to be made at intervals not within six months of each other.

The machinery consists of a steam-engine, 26-inch cylinder, 6-foot stroke, with 67 yds. of 6-inch pitwork, and 70 yards of 7-inch spare pitwork on the surface, 2 horse-whims, 300 yards of chain, kibbles, capstan rope, dressing tools, office, &c.

Applications for shares to be made at the office of Messrs. Francis and Lightoller, 34, Exchange Arcade, Manchester, where a meeting will be held after three-fourths of the shares have been applied for, when the mode of management and monetary affairs will be agreed upon.

NEW COPPER BOTTOM MINE, SITUATE IN BRIDESTOWE AND SOUTON, Divided into 5000 shares, of 25s. each.

COMMITTEE OF MANAGEMENT, pro tem.

Mr. W. P. HAYMEN. Mr. GEORGE BATTERS.

Mr. E. R. CUNDELL. Mr. GEORGE CARNE.

Resident Agent—Captain James Phillips.

Purser—Mr. N. Sims.

Secretary—Mr. W. L. Ternan.

OFFICES.—No. 28, THREADNEEDLE-STREET, CITY.

A meeting of the adventurers will be held as soon as the share list is complete, when the rules will be submitted, and a Committee of Management elected from the shareholders.

NEW COPPER BOTTOM.

This Mine is situated in a district which has long been regarded, by practical geologists, as presenting by far the most promising combinations for a large deposit of minerals of any untried ground either in Devon or Cornwall. It was to this particular locality that the Geological Section of the Royal British Institution, on the occasion of their holding their Session at Plymouth, and when visiting the Tors of Dartmoor, pointed as the place where rich deposits would be found. The result has proved the correctness of this view; several young mines are already at work; and the lodes opened on everywhere present more than ordinary promise.

New Copper Bottom is in the heart of this vast basin; several lodes traverse the set, on which costean pits have been sunk, and all are worthy of a spirited trial. An adit has been already driven 110 fms., and is now 27 fms. from surface, and a level driven from it east and west on the course of one of the lodes passed through, which is being extended so as to ascertain the character of the lode and the best point to sink on in it depth.

A never-failing stream of water is at hand for working any machinery, and dressing the ores, rendering the prosecution of the mine easy and economical.

In the course of 50 fms. further driving, the adit will intersect the Great Souton lode at a considerable depth. Fine stones of ore have been broken from it at surface, and a practical mining captain, well conversant with Devon Consols, has pronounced it a finer lode than he ever saw in Europe, and only to be compared with what he witnessed in South America.

The Mine is being worked on the economical Cost-book System; and the shares being all paid up, there is no possible liability.

Applications for the unappropriated shares can be made to any of the mine sharebrokers, or to Mr. W. L. Ternan, secretary, at the offices of the company, 28, Threadneedle-street.

PENMACHNO LEAD MINES, NEAR LLANWRST, CARNARVONSHIRE.

ON THE COST-BOOK PRINCIPLE.

In 1600 shares.—Deposit £2.

The land on which the above mines are situated is of the same strata as the celebrated Llanurion Mines, Cardiganshire—the shares in which are now selling at ten times their original cost.

The Penmachno Mines have been recently inspected by Captain Abasalom Francis and Mr. John Williams, who have reported thereon in a favourable manner, but since which some valuable discoveries have been made, and a large quantity of ore is now in sight. Contracts have been entered into for getting, dressing, and making the ore ready for market, at £2 per ton, to which add the carriage, 10s., will make the cost at the smelters at Blyth £26 10s. per ton, exclusive of royalty; but even this price, there is little doubt, will be materially reduced in the course of a few short months.

There is also a large quantity of sulphur ore, of high per centage, which may be worked and brought to market at a low figure and sold to great advantage, and for which there is at the present time an unlimited demand.

The mines are held under an agreement for lease of 21 years, 1-10th royalty, and will be divided into 1600 shares, deposit £2 per share on receipt of scrip, with power to make calls of not more than 5s. each, but such calls altogether not to exceed the sum of £2; and unless some unforeseen casualty occurs, it is impossible more than the first call will ever be required.

Applications for shares may be made to Mr. James Crofts, 4, King-street, Cheapside, London; or to Mr. J. W. Smith, 10, South Castle-street, Liverpool, where prospectuses and reports may be obtained.—Liverpool, March 8, 1851.

SAINT ENODER CONSOLIDATED COPPER AND LEAD MINING COMPANY.—SAINT ENODER, CORNWALL.

Capital £12,000, in shares of £1 each, all paid up.—No further call or liability.

ON THE COST-BOOK PRINCIPLE.

COMMITTEE OF MANAGEMENT.

EDWIN BECKET SMALL, Esq., St. Alban's-terrace, Kennington, and Normanton,

near Northampton.

JAMES BAGWELL HOBBS, Esq., North-hill, Highgate.

ISAAC ASHMORE, Esq., Lexington Spa.

EDWIN BALL, Esq., Half Moon-street, Piccadilly.

(With power to add.)

Bankers—Sir John William Lubbock, Bart., Forster, and Co., Mansion-house-street.
 Solicitor—Peniston Grosvenor Greville, Esq., 42, Lombard-street.
 Secretary—Mr. William James Payne.

OFFICES.—4, CHARLOTTE-BOW, MANSION-HOUSE.

These celebrated mines include the Wheal Wellington and Wheal Cocke, which were worked by Cornish shareholders in 1831 to the year 1835, when, like many other mines of the most valuable character, they were suspended in consequence of the then very low standard of copper, and the depression generally prevailing in all commercial and speculative affairs. Sufficient capital could not be raised to purchase adequate machinery to prosecute the undertaking, but in no way affecting their credit or the high estimation in which they were held by the Cornish shareholders.

The Wheal Cocke Mine adjoins the above set—the shares, on which £3 has been paid, find ready buyers in the market from £25 to £30 per share, and cannot be obtained at the latter price. The last report states the mine to look more promising than ever.

The outlay of former shareholders has been very considerable in driving adit and other levels, sinking engine and other shafts to the depth of 40 fathoms from the surface; and during its working considerable quantities of copper and lead ores were raised, of a quality to command a very high price in the market—the highest price of copper ore at that time being £3 12s. 6d., the lowest £4; best quality of lead ore, the lowest price £11 15s. Ores raised from January, 1834, to 6th July, 1834, were upwards of £4000; and it is only fair to calculate from these returns, which paid the shareholders 50 per cent. on their outlay, that had the undertaking been further and efficiently developed, a very large per centage would have been realised.

Any future company proceeding with the works will necessarily derive the advantage of the shafts sunk and levels driven by the former shareholders—considerable gain as regards both time and money; and such was the opinion of the former company that they would be again resumed, that they left undisturbed all the pumps, rods, stays, ladders, miners' tools, cisterns, &c.

The course of ore already discovered, on re-opening these works, may be resumed as soon as the water is drained off, which can be accomplished within a very limited period after the erection of a steam-engine.

It is proposed to raise the required capital of £12,000 in shares of £1 each, to be paid on allotment. The lease of the mines, for 21 years, at 1-18th dues, will be transferred to the company, clear of all rent and charges.

Further particulars may be obtained of, and application for shares may be made to, J. J. Beechell, Esq., 5, Pall-mall, Manchester; Andrew Mercer, Esq., 144, Queen-street, Glasgow; Harry Hargreaves, Esq., Halifax; Peniston Grosvenor Greville, Esq., No. 42, Lombard-street; and to the Secretary, at the offices of the Company, 4, Charlotte-row, Mansion-house, London.

REPORT

OF WHEAL COCKE, in the parish of St. Enoder, Cornwall.

In compliance with your request, I beg to send you a report of the above-named mine. This mine ceased to work about 26 years since. During its working a 24-inch cylinder steam-engine was employed, which drained the water to a depth of 40 fathoms, and during its work considerable quantities of copper and lead ores were raised, of a quality to command a high price in the market. There are four lodes in the set discovered—one running north and south, and the others east and west; on the north and south one but little was done, but on the east and west a large quantity of superior copper and lead ores was raised; the ore appeared to be increasing in depth, but from the want of sufficient steam-power, and the inability of some of the shareholders to erect such machinery, it was suspended.

It is my opinion, that if a powerful steam-engine was erected (say 50 inches), with other necessary machinery, would be a permanent and profitable mine indeed: the prospects fully justify my opinion.

The north and south lode forms a junction with the other lodes in the set, where I would particularly recommend a special trial to be made, having no doubt as to the successful result. I draw my conclusion from the circumstance of my having personally inspected the lodes prior to its suspension, and broke from the lode, at the depth of 40 fathoms, some fine stones of copper ore.

WHEAL WELLINGTON.

This mine adjoins Wheal Cocke on the south and west, and can be best worked in conjunction with Wheal Cocke; the same machinery will, to a great extent, command them both: two of the lodes in Wheal Cocke pass through this set. Wheal Wellington was worked by a small water-wheel to the depth of 10 fathoms, at which depth the east and west lode was cut, and raised some fine stones of copper ore, but an ineffectual trial only was made on the lode, as in cutting it the water so much increased, that the water-wheel was inadequate to the task of drawing the water—consequently, but little can be known of this, except that some fine stones of copper were raised; this, together with a beautiful gossan at the surface, and a fine stratum congenial to copper, are indications which should not be lost sight of, and are in themselves sufficient to warrant a more effectual outlay.

THOS. SYMONDS, Indian Queens, St. Columb.

TO THE COMMITTEE OF MANAGEMENT OF THE

"SAINT ENODER CONSOLIDATED COPPER AND LEAD MINING COMPANY."
 GENTLEMEN,—I hereby request you to allot me shares in the above Company, which I agree to accept, and to pay the amount of £1 per share when called upon.

Name in full
 Address
 Occupation
 Reference

Dated this day of 1851.

WHEAL VINCENT.—Offices, 4, King-street, Cheapside, London, March 15, 1851.

At a GENERAL and TWO-MONTHLY MEETING of the adventurers, held at the offices, No. 4, King-street, Cheapside, in the City of London.

JOHN PARLEY, Esq., in the chair.

The Purser read the circular convening the meeting, and the Secretary read the minutes of the Special General Meeting of 18th January last, which were confirmed. Mr. Murray, the superintendent, attended the meeting, and a report from Capt. Reynolds, dated 11th March, was read, giving a very satisfactory account of the progress of the workings (with the exception of a bar of hard ground in the new shaft, now sunk 14 fathoms out of 20), and stating that 2 tons of ore would be ready for sale by the end of this month.

It was decided by vote, that the question of a steam-engine for the mine should be deferred until the new shaft is sunk 20 fathoms, and the quality of the lode ascertained by driving upon it at that depth.

The following payments were made:—
 January labour and agency £69 18 11
 Secretary's salary for two months 8 6 8
 A. Murray, Jun., ditto 4 3 4
 Thomas Reid, Jun., ditto 4 0 4
 Jones and Causton, stationery, &c. 7 5 0
 Captain Webb's attendance at the mine 1 0 0
 Wm. Northan, lease of Trevent Marsh set 26 5 0
 Total £120 18 11

A call of 5s. per share was made, payable by 2s. 6d. immediately, and 2s. 6d. in one month.

Captain Spargo having made a demand upon the mine for salary, &c.—

It was resolved unanimously, that the same be resisted, on the ground that the erection of the wind machine, at a considerable expense, was unauthorized by the Company, and when erected found totally useless, being a machine for which no precedent exists in mining annals; and, moreover, the Company are in possession of a letter, addressed to Mr. Wiseman, in which Captain Spargo offers to pay all the expenses of the machine himself, should it not answer its purpose, and that Captain Spargo be requested forthwith to pay for the said machine.

The Purser was requested to send him a copy of this resolution.

The Finance Committee was re-elected, and the next two-monthly meeting fixed to take place in King-street on the 10th May, at Two o'clock. JAMES CROFTS, Sec.

DOLANGWYN SLATE QUARRY, NEAR ABERDOVEY, NORTH WALES.

TO CAPITALISTS AND OTHERS SEEKING INVESTMENT.

A fine SLATE PROPERTY, in NORTH WALES, now presents itself to the notice of the public; it is only 7 miles distant from a shipping port (Aberdovey), with a good turnpike-road the whole way—at which port the Slate and Slab can be shipped at a moderate freight, either for London or Liverpool.

The joints in the Quarry are very good, and the metal (a bright blue, and free from spots) is equal to any produced in the Principality.

The extent of the vein is about three-quarters of a mile in length, by an average width of from 30 to 30 yards; and, from the favourable position and inclination of the vein, it can be opened and wrought at a comparatively small outlay. The fall for refuse is all that can be wished for, and the space ample for centuries.

There is water-power sufficient for all purposes of machinery within about 250 yards of the Quarry, to which an incline can be made at a trifling expense.

It is proposed to put this property into 4000 shares, at £5 each. The allotment of shares will take place in the early part of the next month (April). A deposit of £1 10s. per share will be required upon allotment, and no call to be made at a less interval than six months, and then only of 10s. per share, with the full consent of a majority of a general meeting, to be called for that purpose.

A General Meeting will be called within 14 days after the allotment of the shares, when trustees and a managing committee will be chosen from amongst the shareholders present.

Applications for shares (not less than five), prospectuses, &c., to be made to the Secretary, at the offices of the Union Mining Company, 8, Austinfriars, London.

CHARLES WHEATCROFT, Secretary.

WHEAL ENYS TIN MINE, WENDRON, CORNWALL.

Held under lease from John S. Enys, Esq., of Enys, for 21 years, nearly 20 of which are unexpired, at 1-18th dues; to be reduced to 1-20th as soon as an engine shall be erected.—Divided in 1070 shares, at 30s. per share, free of all liabilities to the present time. Conducted strictly on the "Cost-book System," under the superintendence of a Committee, to be appointed at the first general meeting, which will be convened immediately after the allotment.

Purser—Mr. JOHN TRETHOWAN, Little Falmouth.

Bankers—Messrs. TWEEDY & CO., Falmouth.

Applications for not less than Five of the remaining shares (about 150) may be made to the Purser, at Little Falmouth; Messrs. T. Leeds and Son, St. Austell, Manchester; Mr. W. Fenton, 5, White Hart-court, Lombard-street, London; Mr. J. Daves, 28, Tower-buildings, Liverpool; Messrs. T. W. Flint and Co., Hull; Mr. T. Lewis, 17, New Meeting-street, Birmingham; or to Mr. Williams, accountant and mine broker, Green Bank-terrace, Falmouth,—from either of whom prospectuses and every information can be obtained.

APPLEDORE SILVER-LEAD AND COPPER MINE, SAINT IVE, CORNWALL.

Divided into 1024 shares.—Dues 1-18th.

CONDUCTED ON THE COST-BOOK PRINCIPLE.

COMMITTEE OF MANAGEMENT.

GEORGE RICH, Esq., Fimlico.

THOMAS BATTERS, Esq., St. John's Wharf, Westminster.

JAS. TORKINGTON, Esq., Grayeend.

Bankers—Devon and Cornwall Bank, Exeter; Messrs. Barclay, Bevan, & Co., London.
 Purser—Edward Anson Greave, of West Caradon.
 Managing Agent—Robert Dunstan, of West Caradon.

This set is granted by W. D. Horndon, Esq., at 1-18th dues, and extends about a square mile, and near to the most productive silver-lead mines in the county—namely, Wheal Mary Ann, Trevelyan, Venton, Trehan, and other rich and dividend-paying mines. There are five parallel lodes running through this set, and two copper lodes; the former are from 3 to 12 feet through, composed of rich gossan, mundic, candied spar, floukan, peach, pr

MINING JOURNAL, RAILWAY AND COMMERCIAL GAZETTE.

It being difficult to obtain a correct knowledge of all the mines in our list, we trust that agents, and others interested, will assist us, by forwarding any additions, or corrections, with which they may be acquainted—our object being to present it as accurate as possible. We have also added a column to note the actual business transacted; but which, without the constant assistance of brokers and agents, cannot become so complete as we could wish. The desirability of such a record is generally admitted, and we invite the co-operation of all parties concerned, in rendering it perfect.

Share.	DEVON DISTRICT.	Paia.	Last Price.	Present Price
3090	Aylesborough (tin), Sheepestor	10	1 1/2	1 1/2
4000	Bedford United (copper), Tavistock	10	61 8/8	71 8/8
1300	Big Tins and Vines (tin), Dartmoor	1	1 1/2	1 1/2
1024	Bottle Hill (copper), Plympton	1	1 1/2	1 1/2
3048	Boringdon Park (silver-lead), Plympton	1	5	4 1/2
256	Bridport Consols (lead), Christow	1	—	—
4060	Davon and Courtenay Consols (copper)	1 1/2	1 1/2 1 1/2 1 1/2	1 1/2
1024	Devon Great Consols (copper), Tavistock	1	285 300	300
768	Devon Great Tincroft, North Bovey	1	6	—
250	East Birch Tor (tin), North Bovey	3	8	—
2048	East Crowndale (tin), Tavistock	7 1/2	3	3
4000	East Gurnal Lake Junction (copper)	1	1 1/2	1 1/2
9000	East Tamar Consols (silver-lead), Ashburton	1 1/2	1 1/2	1 1/2
2048	East Wheel George (cop.), Walkhampton	1	10	—
512	East Wheel Josiah (copper), Tavistock	1 1/2	1 1/2	1 1/2
4000	East Wheel Russell (copper), Tavistock	2	5 5/8	5 1/2
1024	Exmoor Eliza (copper), South Molton	3 1/2	1 1/2 2 1/2	—
6000	Fenore (copper and silver-lead), Devon	—	—	1 1/2 1 1/2 1 1/2
1500	Hennock (silver-lead), Hennock	2 1/2	2 1/2 3 1/2	—
1024	Kingzett and Bedford (lead and copper)	3 1/2	2 1/2	—
1744	Lamerhouse Wheal Maria (copper & tin)	1 1/2	10	10
2000	Molland	—	3 3/4	—
300	Nap Down and Vines (copper), Combarnie	1	1 1/2	—
5000	New Copper Bottom (copper) Bridestow	1 1/2	—	—
2048	New East Crowndale (copper and tin)	1	1	1
1024	North Wh. Robert (copper), Walkhampton	2	1 1/2 2 1/2	2
512	Old Brimpts (tin), Lydford, near Ashburton	—	12	—
1000	Peter Tavy and Mary Tavy (copper)	3 1/2	5 6 7	6 1/2 7 1/2
512	Plymouth Wheal Yeoland (tin), Plymouth	6 1/2	6	—
2048	Runnaford Coombe (tin)	3	3 1/2 4	—
256	South Friendship Wh. Ann (copper & tin)	30	28 30	—
256	South Molton (lead)	1 1/2	8	—
1024	South Plover Wheal (copper), Ashburton	3 1/2	—	7
9000	South Tamar (silver-lead), Bear Ferris	1	2 1/2	2 1/2
9000	Tamar Consols (silver-lead), Beeralston	4	5 1/2	5 1/2
687	Tavy Consols (copper), near Tavistock	8	3	2 1/2
1024	United Mines (copper and tin), Tavistock	10	10	—
1024	West Downs (copper and tin), Whitechurch	2	1	—
1024	West Wheel Friendship (copper)	3	4	4
4000	West Wheel Russell	—	2	2
1070	Wheal Adams (lead), Christow, Exeter	1 1/2	15	—
1024	Wheal Carpenter (tin & cop.) S. Sydenham	1	2	—
1024	Wheal Gann (copper), Tavistock	2 1/2	6 1/2	7 1/2
1024	Wheal Emily (antimony and lead)	3	5 6	—
1024	Wheal Fortescue (copper), Tavistock	4 1/2	1 1/2	1 1/2
764	Wheal Franco (copper), near Tavistock	1 1/2	12 13	13
126	Wheal Friendship (copper)	120	120	—
1024	Wheal Hamlyn, near Oakhampton	1	1 1/2	—
2048	Wheal Harris (lead), near Tavistock	1	—	1
2000	Wheal Langmaid (lead)	—	2	1 1/2
1024	Wheal Mary Ann (copper), Bridestow	—	2	—
210	Wheal Prospect	4	7	—
5000	Wheal Plover and South Sydenham	—	2 1/2 4	—
4000	Wheal Russell (copper), Tavistock	1 1/2	1 1/2 1 1/2	1 1/2
EAST CORNWALL DISTRICT.				
1024	Appledore (silver-lead and cop.) St. Ives	1 1/2	2 1/2	1 1/2 2 1/2
3450	Bawden (silver-lead)	—	5	—
256	Berrow (copper), Liskeard	2 1/2	5	3 3/4
1024	Bodmin Consols (lead), Wadebridge	4	7	—
5000	Bodmin Moor Consols (tin and copper)	1	4 1/2 4 1/2	—
1024	Bodmin Wheal Mary (copper)	5	10 11	—
107	Budnick Consols (tin), Perranzabuloe	5 1/2	9	—
512	Butterdon (lead), Menheniot	—	5 1/2 5 1/2	6
1024	Callington Consols (copper), Callington	2 1/2	7 1/2	7 1/2
4000	Calstock United (copper)	5	5	5
1000	Camborne Consols (copper), Camborne	7	8	—
1168	Caradon Great Cons. (cop.), Linkinhorne	7	3	—
1536	Caradon Vale (copper and lead), St. Ive	2 1/2	1 1/2	—
1000	Carn Brea (copper and tin), Illogan	15	125 12 1/2	—
3000	Carthew Consols (cop. & lead), Wadebridge	4	7	—
1056	Carrannall (copper), Gwennap	2 1/2	5	5
256	Claymore, St. Enoder, Cornwall	3	25 30	—
500	Comblauze (lead), Callington	8	—	—
126	Condarro (copper and tin), Camborne	65	67 1/2	67 1/2 75
256	Condroow (copper and tin), Camborne	20	110	—
2000	Coombe Valley (quarry slate), St. Gluvia	3	3	—
1000	Copper Bottom (copper), Crowan	7	6 1/2	—
211	Cradock Moor (copper), St. Cleer	2 1/2	7	—
256	Crane and Bejawa (copper), Camborne	41	30	31
180	Dolcoath (copper and tin), Camborne	252	18 20	—
2560	Drake Walls (tin and copper), Calstock	6 1/2	4	4
1536	Duke of Cornwall (copper), St. Winnow	1	2	—
1024	East Buller (copper), near Redruth	4	6	—
126	East Gann (copper), Redruth	4	3	—
1024	East Polgooth (tin)	6	5	—
128	East Pool (tin and copper), Pool, Illogan	2 1/2	150 160	155
256	East Soton and Wheal Maude, Redruth	4	4 1/2	2 1/2
1024	East Sharp Tor (copper)	5	8	—
256	East Tolgus (copper), Redruth	4	20	—
1000	East Trescott (tin), Lanivet, near Bodmin	1	2 1/2	—
256	East Tywarhaye (copper), St. Agnes	11	19	11 1/2
94	East Wheel Crofty (copper), Illogan	125	150 160	—
256	East Wheel Frances (copper), Illogan	2 1/2	3	2 1/2
512	East Wheel George (copper), Illogan	8	15 17 1/2	—
256	East Wheel Rashleigh, Looe	—	10	—
128	East Wheel Rose (silver-lead), Newlyn	50	560	—
494	Fowey Consols (copper), Tywardreath	40	30	—
2560	Garra (silver-lead), near Truro	5 1/2	4 1/2	—
256	Gonamena (copper), St. Cleer	46	15	—
243	Grambler and St. Aubyn (copper)	80	45	45
96	Great Consols (copper), Gwennap	1000	250	—
11000	Great Polgooth (tin), St. Austell	2	2	—
1024	Great Sheba Consols (tin and copper)	5	1	10
3000	Great Wheal Mary (cop. & Stoke Clims	1	1	—
3072	Great Wheel Mitchell Cons. (cop.), Lanivet	3	5	—
1026	Gustavus Mines (copper), Camborne	6 1/2	6 1/2	—
512	Gt. Wh. Rough Tor (cop.), Camelford	29	20	—
6000	Growa Slate Company, Camelford	5	5	—
1024	Hawkmoo (cop.), Calstock, Gunnis Lake	5	8	—
6000	Holmston Down Cons. (copper), Calstock	21	2	2
512	Horsfoot (lead), near Liskeard	16	12 1/2 13	13
1000	Holmbush (lead and copper), Callington	24	25 1/2	23 1/2
352	Lanarid's Consols (copper), Gwennap	10	8	—
6000	Lanarid's Valley (copper), Gwennap	10	3 1/2	—
256	Mineral Court (tin), near St. Austell	25 1/2	50	—
1024	Moditonham & Marrabor (copper & lead)	17 1/2	2 1/2 3	—
300	Nansogellan (tin and copper), Camborne	3	3	—
1024	North Buller (copper), Redruth	4	12 1/2 15	—
256	North Fowey Consols	—	25	—
100	North Pool (copper and tin), Pool	45	440	465 500
140	North Rosear (copper), Camborne	10	160	160
256	North Tolgus (copper), Redruth	9	31	21
256	North Trella Consols (copper), Redruth	1	1	—
6000	North Wheel Bassett (copper and tin)	2	—	20 25
1200	North Wh. Buller, or Gt. South Tolgus	5	—	14
252	North Wheel Lelsure, Perranzabuloe	1 1/2	1 1/2	—
1024	Okel Tor (lead)	13	4 1/2	—
128	Par Consols (copper), St. Blazey	55 1/2	650	—
1026	Pendarvas Consols (copper), Camborne	2 1/2	6 1/2	6 1/2
1026	Pendarvas and St. Aubyn (tin and copper)	5	10 12	—
406	Penhauser	1	6	—
548	Pentire Glaze (silver-lead), St. Minver	5	6	—
1168	Perran (copper and tin), Camborne	21 1/2	45	—
300	Phoenix (copper and tin), Linkinhorne	—	240	—
1000	Polberro (tin), St. Agnes	15	—	—
2000	Polgar (copper and tin)	1	3	—
5000	Roche Rock (tin), Roche, near St. Austell	1	1	—
5000	Roche and Treverbyn (tin), St. Austell	4 1/2	5 1/2	—
1000	Silver Valley & Wh. Brothers (cop. & tin)	1	1 1/2	—
256	South Caradon (copper), St. Cleer	30	110 115	115
3000	South Carn Brea (copper), Illogan	16	—	—
1100	South Gann (copper), Illogan	6	6	—
256	South Tolgus (copper), Redruth	10	145 50 52 1/2	150
256	South Treloary (lead), near Liskeard	31	1 1/2	1 1/2
256	South Wheel Bassett (copper), Illogan	10 1/2	370	—
248	South Wheel Frances (copper), Illogan	80	290 300	300
256	South Wheel Josiah (copper), Calstock	2	3 1/2	—
999	St. Minver Consols (silver-lead)	1	6	—
1000	Stray Park and Camborne Veau (copper)	15	15 17 1/2	16 17 1/2
6000	Tincroft (copper and tin), near Pool	—	6 1/2	7
128	Tobemary (copper), Redruth	8 1/2	10	10
1200	Tolgar (tin and copper), Camborne	8	5	—
2048	Trebell Consols (tin and copper), Llanivet	1 1/2	1 1/2	1 1/2
512	Trebarget United (lead), St. Teath	1	—	—
600	Tregadock	1	5	—
2000	Tregear Consols (antimony & silver-lead)	1	—	—
256	Tregorden (silver-lead), Wadebridge	10	7	—
256	Trehane (silver-lead), Menheniot	1 1/2	15	13 1/2 13
2000	Treleigh Consols (copper), Redruth	6	2 1/2 2 1/2	2 1/2 2 1/2
8000	Trehance (copper), Redruth	—	—	—
256	Trevellick (copper), Gwennap	20	210 215	215
512	Trevellick (copper), Gwennap	5	20 21	—
512	Trevellick (copper), St. Cleer	7	6 1/2	6
512	Trevilly (lead), Lewaulek	27	9	—
120	Trevellick and Barrior (copper)	130	235 45 50	230
500	Tywarhaye (cop.), Illogan & St. Agnes	70	30 32 35	—
2000	United Mines (copper), Gwennap	300	110	—
5000	Waristean Consols (copper)	—	1	1 1/2 1 1/2
300	West Buller (copper), Redruth	10	900	—
300	West Caradon (copper), Liskeard	20	110 112 113	112 115
512	West Fowey Cons. (tin & cop.), St. Blazey	40	60	—

Share.	EAST CORNWALL—Continued.	Paid.	Last Price.	Present Price.
1024	West Par Consols (copper), St. Blazey ..	10	11	.....
1024	West Phoenix Linkinghorne	3	4	.....
2300	West Fulgoth (tin), St. Ewe & St. Mewan ..	5	8	.....
2900	West Consols (copper), Camborne ..	67	123	123
3000	West Shagard (silver-lead and copper) ..	13	2	.....
940	West Tolons (copper), Illogan	13	2	5
120	West Trethellan (copper), Gwennap ..	13	20	.....
512	West Wheel Frances (copper), Illogan ..	7	22½	23
3725	West Wheel Jewel (tin and copper) ..	12	2	.....
2048	West Wheel Rose (lead), Newlyn ..	2½	3	.....
530	West Wheel Towan (copper), Illogan ..	15	15 17½	.....
1228	Wheel Arthur (copper), Calstock ..	14	45	5
300	Wheel Arthur (lead), near East Wh. Rose ..	17	49	.....
2124	Wheel Calstock (copper), Calstock ..	9	2	.....
1000	Wheel Ager (copper), Illogan ..	6	5½ 5½	.....
1024	Wheel Bray (copper), Altarnun ..	11½	—	.....
500	Wheel Daniell (copper), Chacewater ..	10	10	.....
3000	Wheel Dora (tin and copper), St. Cleer ..	3	4½ 4½	.....
182	Wheel Elizabeth (copper), Redruth ..	19	25	18
182	Wheel Ennis (lead), St. Erme ..	12	20	.....
100	Wheel Friendly (tin), St. Agnes ..	70	65	.....
4000	Wheel Golden (lead), Penzance ..	2	5½ 6½	.....
2550	Wheel H. Jones (copper), Cam-orne ..	1	1½ 1½	.....
216	Wheel Henry (copper), Ken, near Truro ..	25	—	.....
256	Wheel Kingston (copper and silver-lead) ..	4	1	.....
6000	Wheel Langford (copper and silver-lead) ..	2	2	2
1024	Wheel May (silver-lead and copper) ..	2	2½	.....
990	Wheel Mary (copper), Redruth ..	15½	7½	.....
512	Wheel Mary Ann (lead), Menheniot ..	5	60 11 24 64	65 67½
3000	Wheel Penhale (lead and copper) ..	2½	5½	.....
128	Wheel Penny (copper), Redruth ..	19	38 39	.....
128	Wheel Pollard (copper), St. Cleer ..	13½	—	5½
512	Wheel Prudence (copper), St. Agnes ..	1	1½	.....
512	Wheel Selena (copper), Redruth ..	1	1½	.....
194	Wheel Seta (tin and copper), Camborne ..	107	225 230	.....
512	Wheel Sophia (silver-lead), Lizard ..	7	7	.....
512	Wheel Sproy (copper and lead) St. Columb ..	4	1	.....
2000	Wheel Ton (tin & copper), Stoke Clims ..	5	7½ 7½	.....
512	Wheel Trevisa (copper), Gwennap ..	6½	12	.....
1024	Wheel Tremar (copper), St. Cleer ..	1	1	1½
3200	Wheel Trevelin (tin), Lanivet, Bodmin ..	2½	—	55 55½
256	Wheel Treway (copper), Llan-der-fer ..	11	20 52½ 54½	.....
256	Wheel Tremaine (copper), St. Ervan ..	11	24	.....
267	Wheel Tryphena (tin and copper) ..	40	38	.....
126	Wheel Union (copper), Redruth ..	40	45 50	.....
1024	Wheel Uny (tin and copper) ..	2	5½	.....
1024	Wheel Venton (silver-lead), Liskeard ..	3½	7 7½	6½ 7
910	Wheel Vincent (tin), Altarnun ..	7½	6½	.....
128	Wheel Violet (tin and cop.), St. Stephens ..	5	3	.....
128	Wheel Violet, Penzance ..	3	5	.....
184	Wheel Vyvyan (cop. & tin), Constantine ..	60	60	.....
WEST CORNWALL DISTRICT.				
5120	Alfred Consols (copper), Hayle ..	3	15½ 15½ 16	15½ 16
1024	Balnewidien (tin), St. Just ..	9	9 10	10½
940	Balnoon Consols (tin), Uny Lelant ..	—	4½ 5	.....
40	Bolowall and Nanpean (tin), St. Just ..	10	16	20
128	Boscan (tin), St. Just ..	5	18 20	.....
100	Boscan (tin), St. Just ..	1	1	.....
100	Botallack (tin and copper), St. Just ..	182	220	215 220
1000	Carbona (tin and copper), Crowan ..	5	12	.....
2310	Cook's Kitchen (copper and tin), Illogan ..	15½	8½	.....
128	Drift Moor (tin), Saneered ..	1	1	.....
1024	East Balnewidien (tin), Saneered ..	14	24	.....
256	East Godolphin (copper), Crowan ..	17½	21	.....
1000	East Wheel Reeth ..	4	1½ 2	.....
1024	East Wheel Margaret (tin and copper) ..	—	1½ 1½	.....
2500	East Wheel Consols (tin), St. Ives ..	2	7½ 7½	.....
512	Great Wheel Alfred, St. Erth and Phillack ..	20	—	3 3½
512	Great Wheel Badden (tin and silver-lead) ..	2	85	.....
512	Hawke's Point (copper), Uny Lelant ..	7	3½	.....
1024	La Min (Gwinear), tin and copper ..	24	5	.....
256	Lelant Consols (tin), Uny Lelant ..	57	22½	22
100	Levant (copper and tin), St. Just ..	—	175	.....
1000	Lewis (tin and copper), St. Erth ..	17	19	20
1024	Mill Pool (tin and copper), St. Hilary ..	1	7	6
1000	North Levant (tin and copper), St. Just ..	5	5	.....
512	North Wheel Vor (tin), Breage, Helston ..	1	—	.....
1024	Penzance Consols (tin), Saneered ..	14	2 3 3½	3 3½ 3½
1024	Præd Consols, Towanack ..	1	1	.....
560	Providence Mines (tin), Uny Lelant ..	20½	20	

Shares.	FOREIGN MINES.	Paid.	Present Price.
5000	Alten Mining Company (copper), Norway	14 1/2	3 1/2
12000	Annotto Bay Mining Association (copper), Jamaica	1	56
15000	Asturian Mining Company (coal, iron, &c.), Spain	15	—
20000	Australian (copper), South Australia	4	21
20000	Barrosa Range (copper), South Australia	1 1/2	1
10000	Brazilian Lajello (gold), Brazil	23	41 1/2
5000	Cobre Copper Company (copper), Cuba	3	34 3/8
10000	Copelapo Mining Company (copper), Chili	14	6 1/2 7
20000	General Mining Association (iron & coal), Nova Scotia	90	14
5000	Kinzigtal Mining Association (silver), Germany	2	—
12000	Liguanea and General Mining Company of Jamaica	1	3 1/2
5000	Linares (lead), Spain	3	24 2 1/2
800	Delto Preference	3	34
500	Delto New	4	1
20000	Mexican and New World American (silver), Mexico	59 1/2	1 1/2
8051	Mexico Company (silver), Mexico	30	1 1/2
5000	National Brazilian (gold), Brazil	30	1 1/2
104000	North British Australasian (copper), S. A. & New Zea.	1	—
7000	Royal Santiago (copper), Cuba	10	61 7 1/2 7
11000	St. John del Rey (gold), Brazil	15	148 3 1/2 10
43174	United Mexican (silver), Mexico	28 1/2	9 1/2 4 1/2
10000	Worthing (copper), Adelaide, South Australia	3	20 2 1/2

FORMATION OF ARTIFICIAL RUBIES.—M. Ebelen, director of the manufactory of Sevres, has succeeded in producing crystallized minerals resembling those produced by nature, being for the most part of that species of precious and rare stones employed by jewellers. To obtain this result he has dissolved in boric acid of alum, zinc, magnesia, oxides of iron and chrome, and afterwards submitting the solution to an evaporation for the space of three days, he has obtained crystals of a mineral substance, equal to those of nature for hardness and clearness of colour. With chrome M. Ebelen has produced rubies of a beautiful red colour, measuring from two to three millimetres in length, and being about as thick as a grain of corn.

ACCIDENTS

Another dreadful Explosion in a Colliery.—Another of those dreadful catastrophes, which so often, and in such a fearful manner bring to an untimely end whole groups of the mining population, occurred at the Victoria Colliery, the property of Messrs. Coats, of Aylesbury, situated at Nithshill. It appears that about three o'clock on Saturday morning that the men were going down to their work in successive gangs, and about five o'clock, in the cage had just landed some men who had been at work during the night, and while a number of men were standing round the pit's mouth waiting their turn to descend, the most terrific explosion occurred, by which the whole of the pitwork was blown high in the air from a depth of 175 fms., and distributed in a perfect shower for 100 yards round the pit; the men at surface threw themselves on their faces and escaped unhurt, but we regret to record that out of 63 who are known to have descended, only two—named James and John—were saved. The explosion was so violent, that it had a dreadfully exhausted state, after an imprisonment of 45 hours, the pit having been filled with debris and rubbish to a height of 240 feet. The living men are unable to give any account of the origin of the accident; the mine was one of the best ventilated in the kingdom, the Messrs. Coats is said have never spared expense to render it safe, and Hammond, the assistant underground overman was an experienced and careful man, in whom the colliers had every confidence. The only way of accounting for the accident is to suppose a sudden depression of the roof, which liberated large blowers of gas, and formed also a reservoir for it, until a light being brought within its influence the catastrophe took place. It is stated to have consisted of three or four separate throes or convulsions, which lasted altogether full two minutes. The p was in the operation, turning out 240 tons of coal per day, and so conducted, were the owners of the property, and the management of the colliery, and working conditions, that a valuable model was being constructed for the Exhibition, and which probably not now be forwarded. It has been ascertained that all the bodies will be found on the faces where the men worked, but the brattices and stoppings having all been blown down, the foul air is so dense that they must be replaced before they can be reached. This colliery was of so fiery a character that a single hour's interruption of the courses would occasion an accumulation of gas sufficient to shatter all the erections through the 70 acres of workings, and yet scarcely any accidents have happened, although naked lights are used, except by the viewer in the morning. This is probably all that ever be known of this lamentable affair; there is no coroner's inquest in Scotland, and the bodies were so badly injured, that consequently no examination of any individual. About 30 of the bodies have been got out, and the authorities are so averse that they were suddenly surprised—some sitting with their pipes in their mouths, others in the act of pulling off their jackets, and the majority evidently just commencing work, when their picks in hand. Mr. Dunn is on the spot making an inquiry, but nothing has yet transpired from him. A subscription is getting up for the widows and children of the victims, generously headed by Mr. Coats with a donation of 500*l*.

Dreadful Boiler Explosion.—One of the most serious and destructive steam-boiler explosions which has occurred for years took place on Monday evening last, at the Park End Mills, Stockport, on the Cheshire side of the Mersey, the property of Mr. Henry Warden, and the oldest and most extensive in the manufacturing districts. There were four large horizontal cylindrical boilers, each 60 ft. long, and 7 ft. 6 in. in diameter, used for heating open copper for boiling calico, and were calculated to contain 18,000 lbs. to the inch, though never worked to more than 24 lbs. About half-past five o'clock, when all hands, upwards of 1000, were at work in the mill, one of these boilers, nearly a new one, and weighing 12 tons, was seen suddenly to rise from its enormous bed of brick work, and taking a north-westerly direction, shot with the rapidity of a bullet into the air, and fell about 100 yds. from the mill, where it burst into fragments, so that it was feared that some of the men would have been killed or severely injured had it not been for what was termed the shock. Upwards of 80 persons were present in the building, some of whom escaped by bands and cords into the yard, and others threw themselves into the Mersey—one man and a boy so escaped from the sixth floor. The engineer escaped, but the fireman, John Fuller, was killed: 19 bodies, 12 females and nine, have been taken from the ruins, some of them burned to a cinder, while three others are missing, and no doubt perished under the boiler; but under the fire-place, which was at some distance from the boiler, and appeared to have been struck by the copper stays; there were three in the upper part, over the grate, and one had been placed the end under the fire-box, but, by some unaccountable neglect of the maker, it had never been bolted to the opposite cylinder, and consequently hung down useless. The top extends all along the line of rivets for 3 or 4 ft., and the massive iron is curled up like brown paper. An immense quantity of debris from the destroyed building remains scattered all round the base of the boiler, and the fragments of the boiler itself are

Another Boiler Explosion.—Another dreadful casualty has occurred at the Lillybank Mill, belonging to Messrs. Finlayson and Co., at Johnstone, five miles from the one of the Victoria Colliery explosion. About a quarter before six on Wednesday last, while a number of men were round the furnace warming themselves, the boiler burst with a tremendous force, destroying the engine-house and everything in the vicinity, instantly killing seven persons, severely scalding others, and the mill was burnt to the ground. No cause can be assigned for the fearful calamity, as the boiler was examined and repaired in January, strengthened by stays, and reset. The rupture is understood, over the fire-box, similar to the one at Stockport, and the iron is curled up in a pasteboard.

Shovels Iron Works.—As William Jones, who was cutting the end of the hot rails from rolls with a circular saw, was leaning over to adjust the hand lever, he overbalanced himself, and fell into the drum wheel-pit, the wheel of which cut off his head just across ears. He was said to be slightly intoxicated. —David Griffiths was also killed at these rolls, by a fall of coal in Coedcae level.

tion. A fatal explosion took place at Grey's Colliery, about 8 o'clock on Monday morning, by which John Ogden was killed, and James Andrew has since died from his injuries; two others are also in a very precarious state, and several seriously injured. William Joule, a young miner, recklessly took the top from his lamp, and walked up to start where other men were at work, when the explosion immediately took place, Joule among the injured, and acknowledges that he was the author of the calamity. In addition to the usual caution enforced at this mine, any man known to take the top from a lamp was fined 5s., or instantly dismissed.

Dudley.—On Saturday the inhabitants of Dudley and neighbourhood were alarmed by a fearful boiler explosion, occurring at the works of Messrs. Blackwell and Co., Russell's. The engineer, Richard Bowkley, died on Monday from the injuries he sustained, and a man named Holden is hurt most severely.—*Wolverhampton Herald.*

ance.—W. Hickling was killed by a fall of coal at Mr. Case's Rose-bridge Colliery, Wigan.
 boy, a pitman's son at Hebburn, was killed by the coal waggons at Springwell.
 yshire.—A boy 14 years of age, son of Mr. M'Picque, Whitlets, was killed in the
 kson coal pit, by a fall of stone from the roof.

Wadey.—T. Brooks, the tankman at the Old Park Colliery, was killed by falling down a shaft, 40 yards deep. It appeared a skip had just come up, when he pushed the snaf over the mouth to land it, and on the spring of the skip coming down upon it, used the catch of the runner to fly up, and the runner itself to recede, by which he was catapulted into the opening. The catch of the runner was worn thin, and totally unusable. What are the inspectors about?

Knockwater Mines, County Waterford.—A miner, working at a depth of 150 fms., fell as consequence of the earth giving way, a distance of 70 ft. His body was much bruised, but no bone was broken. He shortly after ascended the ladders, and walked home.

Wexfordshire.—A number of men were dreadfully burned by an explosion in a pit, belong to Lord Vernon, at Poynton. One collier was taken out dead.

COAL MARKET, LONDON.
PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.
MONDAY.—Chester Main 12 9.—East Adair's Main 11 6.—Howard's West Hartley

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

Barton 14 6—Longridge West Hartley 14 6—Wylam 13—Wall's-End Gosworth 13
 Harton 13 3—Hotspring 12 6—Lawson 12 6—Northumberland 12 6—Riddell 12 6—Ed-
 13 6—Braddly 14 6—Burnhope 13—Hetton 15 3—Haswell 15 6—Lambton 13
 Hartley 13 6—Richmond 13 9—Russell's Hetton 15—Stewart's 15 3—Whitwell 13
 13 3—Hartlepool 13—Heugh Hall 14 3—Kellog 14 6—Thornley 13 9—
 12 6—Backhouse 12 9—Maclean's Tees 12 9—Pease's West 12 6—Seymour
 Tees 15 3—Birchgrove Grargola 19—Cowpen Hartley 14 6—Hartley 13 6—Syn-
 Hartley 14 6—Ships at market, 188; solid, 52.

WEDNESDAY.—East Ayr's Main 11 6—Longridge's West Hartley 14 6—Wymon
all's—End Gosforth 13 3—Hilda 12 9—Walker 15—Braddyl 15—Burnhope 12 3—
ton 15 6—Haswell 15 6—Lambton 15—Russell's Hetton 15—Stewart's 15 3—Denise
—Heugh Hall 14 3—Kelloe 15—Whitworth 12 6—Backhouse 13—Tees 15 3—Birch
Graigola 19—Gwawn Cae Gurwin Stone 24 6—Hartley 14—Sydney's Hartley 14 6.
Slips at market, 160; sold, 65.

12414—East Adair's Main 11 6—Holywell 14 6—Longridge's West Hartley 14 4
 12415—Main 12 6—Wylam 13 6—Wall's End Brown 12 6—Bewicke and Co. 13 9—Gosford
 12416—Hilda 12 9—Morrison 13 6—Northumberland 12 6—Riddell 13—Eden Main 13 9
 12417—Craddly 15—Hetton 15 6—Haswell 15 6—Lambton 15—Russell's Hetton 15—Stewart's
 12418—Cassop 14 3—Hartlepool 15 6—Heselden 12 9—Heugh Hall 14 3—Kelso 15
 12419—Hartlepool 15—South Kelso 14 3—Whitworth 12 6—Maclean's Tees 13—Seymour
 12420—South Durham 13 3—Tees 13 3—West Cornforth 13—Derwentwater Hartley

—Hartley 13 6.—Sydney's Hartley 14 6.—Ships at market, 101; sold, 58.

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